FIRST ANNUAL REPORT

Africare

Tambacounda Healthy Start Project (THSP)

Tambacounda and Koumpentoum District, Senegal

October 1, 2003 to September 30, 2008

Cooperative Agreement # GHS-A-00-03-00002-00

Submitted by:

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To:

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ACRONYMS

AHED	**Agriculture, Health and Enterprise Development**
BCC	**Behavior Change Communication**
BL	**Baseline**
CBIS	**Community Based Intervention Supervisors**
CBO	**Community Based Organization**
CCF	**Christian Children's Fund**
CDD	**Control of Diarrheal Diseases**
CHA	**Community Health Agent**
CHW	**Community Health Workers**
CNSR	**National Service for Reproductive Health**
DIP	**Detailed Implementation Plan**
DMO	**District Medical Officer**
EPI	**Expanded Program on Immunization**
ERO	**Evaluation Rapide des Organisations**
FE	**Final Evaluation**
GOS	**Government of Senegal**
HIS	**Health Information System**
ICP	**Infirmier Chef de Poste (Head Nurse)**
IEC	**Information Education Communication**
JICA	**Japanese International Cooperation Agency**
KPC	**Knowledge Practice Coverage**
LQAS	**Lot Quality Assurance Sample**
MCH	**Maternal and Child Health**
ME	**Midterm Evaluation**
MNH	**Maternal and Newborn Health**
MOH	**Ministry of Health**
TBA	**Traditional Birth Attendant**
THSP	**Tambacounda Healthy Start Program**
TRC	**Technical Review Committee**
USAID	**United States Agency for International Development**
USDA	**United States Department of Agriculture**

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I. Introduction

This report presents information on the activities accomplished by Africare/Senegal for the first year (October1, 2003- September 30, 2004) of implementing the Tambacounda Health Start Project (THSP). With a grant from the United States Agency for International Development (USAID), in the standard category, Africare is currently implementing THSP in the districts of Tambacounda and Koumpentoum in Southeastern Senegal serving a total population of **45,556** women of reproductive age and **40,995** children under five. The THSP seeks to 1) strengthen community-based health care services and information; 2) raise the quality of service delivery by developing life-saving skills and knowledge to manage complications during pregnancy, delivery, postpartum, and the first year of the child's life; 3) increase awareness of key health behaviors by building the capacity of CHWs and health committee members; 4) mobilize families to better prepare for and manage pregnancy, delivery, and newborn and infant care.

The goal of the THSP is to decrease the morbidity and mortality rates of pregnant women and children under one year of age in the Tambacounda Region by improving community based health care services, increasing community access to health information, and strengthening community linkages with the health care system. The THSP has five objectives:

1) Increase the access to, demand for, and use of quality maternal and child health services, including emergency care;
2) Improve case management of malaria for pregnant women and children under five at the community and health post levels;
3) Improve nutrition of pregnant women and newborns, including promoting vitamin A supplementation and the practice of exclusive breastfeeding;
4) Improve diarrhea recognition and management at community and household levels;
5) Improve the capacity of local partners to plan, implement, monitor and evaluate child survival interventions at the community and district levels, with an emphasis on capacity in maternal and newborn health, malaria, nutrition, and diarrhea.

The primary interventions and levels of effort for the THSP are divided as follows: Maternal and Child Health – 50%; Nutrition/Exclusive Breastfeeding – 20%; Malaria – 20%; and Diarrhea – 10%.

Main activities and accomplishments of the program during the reporting period include: (i) Signing a memorandum of understanding with the Districts; (ii) conducting the baseline KPC Survey and Health Facility Assessment (iii) writing the Detailed Implementation Plan (DIP) and its presentation to USAID and communities for review; (iv) recruitment and posting of Program Coordinator and supporting field officers; (v) receipt of two matching grants for complementary program activities in nutrition; (vi) strong engagement of local stakeholders in the design of the project and its implementation.

II. Main Accomplishments of the Program

A. Baseline KPC and Health Facility Assessment Conducted

Prior to implementing project activities, Africare conducted a baseline Knowledge Practices and Coverage Survey to gain a more detailed understanding of the health status of women and children in the Tambacounda region. This baseline assessment allowed the program to understand the greatest areas of need, leading the addition of one more intervention, namely,

control of diarrheal disease (CDD). This additional 10% level of effort was met with a corresponding decrease in the level of effort for malaria. This was made possible because of changes in the national policy regarding community based distribution of anti-malarials and was further justified because diarrhea was the second leading cause of death, morbidity and hospital visits in children under five in the district. Since this addition, Africare has incorporated this new intervention into the Detailed Implementation Plan with corresponding activities and indicators. The revised Detailed Implementation Plan in found in Annex 1.

The Health Facility Assessment was conducted using 31 facilities in the district. The findings allowed the Africare team to uncover weaknesses as well as areas of collaboration with the District. While in year 1, certain activities were planned including training of the health care workers, by the time the project was well under way, the District had already taken the initiative to conduct certain of these trainings. Out of seventy district personnel, the District has already trained 64 in basic emergency obstetric care. In addition, the District will train the same health workers in the new malaria treatment policies. However, there is still a need to train lower level support staff working at the health facilities. In addition, the project is still working with the District to enhance its Health Management Information System through the inclusion of the private health facilities. With the creation of the new District of Koumpentoum within the original project area, the project staff has planned working meetings with the district staff to ensure integration of the data.

Project staff also conducted an assessment of community-based organizations in the project area. Africare surveyed 19 CBOs out of 160 throughout the district. Africare worked with many of the CBOs in two previous programs: the Agricultural, Health and Enterprise Development (AHED) funded by USDA and the poverty alleviation program funded by the African Development Bank. These groups, most of whom are part of the powerful *Fédération des Groupements Féminins* have been active in local initiatives including health, micro-enterprise, and community development. They have good management structures and financial reporting mechanisms and will be instrumental in the implementation of the THSP.

B. Writing the Detailed Implementation Plan

After conducting the above mentioned baseline assessments, the project staff wrote the Detailed Implementation Plan which was presented to both USAID and stakeholders in the Spring of 2004. Based on comments received at both the CSHGP Mini University and the project stakeholders, the DIP was revised to include a CDD component. After meeting with the USAID CTO, additional changes were made to the DIP, which Africare is submitting as an attachment to the annual report.

C. Recruitment and Posting of Program Coordinator and Project Staff in Tambacounda

Since July 2004, all project staff have been recruited. Due to the remoteness of Tambacounda and its isolation, Africare experienced difficulty in recruiting qualified staff to implement the project. The recruitment process was delayed by negotiations with potential candidates who eventually turned down Africare's extended offers. Africare was able to recruit a staff member from Africare's office in Tanzania to manage the program. Ms. Akim comes to the THSP with extensive experience in project management and community development. She has carried out community based research, facility-based studies and has supervised the training of health care workers and community health workers. Ms. Akim was hired in July

2004 and the rest of the team members immediately thereafter. The placement of these staff in the Tambacounda project office has facilitated project activities since then.

In August 2004, Africare organized an orientation workshop for THSP new staff members. The goal of the workshop was to inform them on the objectives and activities that will be carried out by THSP. As part of its contribution to the matching grant, Africare has provided two vehicles (a Toyota Land cruiser Hardtop and a Suzuki Vitara) and four Honda 125 XL motorcycles. Africare has also contributed four desktop computers with printers to the program and will contribute a large photocopying machine in the near future.

D. Collaboration with the District Health Officials

Africare signed in 2002 an MOU with the health district of Tambacounda to lay the foundation for a future collaboration in our health activities. This MOU emphasized the role and responsibilities of each party regarding training, supervision and coordination. In the framework of implementing THSP activities, it has been decided that a new clause would be agreed upon to include them. Moreover, Africare is currently negotiating an MOU with the new health district of Koumpentoum.

Tambacounda and now Koumpentoum districts are the first strategic partners of Africare in the implementation of THSP. During the program's first year, our collaboration was more articulated in the following activities:

- Regional and District Health Teams participated in baseline surveys (Regional EPI Officer; Regional Supervisor of Primary Health Care; Assistant District Medical Officer; Health Education Officer; EPI Officer for the District).
- Joint Review of the detailed implementation plan and refining of project goals and objectives
- Meetings with District Officials regarding the administrative changes in the district and the addition of another district, Koumpentoum.
- Coordinating with the districts on the annual training plan, and working with each district to incorporate training activities into the operational plans.
- The newly formed THSP Technical Review Committee includes members of both District Health Teams and the Regional Medical Team and other key District and regional level partners.
- The THSP team also participated in the Regional Planning Workshop of the National Malaria Control Program, and contributed to the development of annual work plans for the two health districts.
- The program provided support to the Health Districts during the recently held National Polio Vaccination Days.

E. Creation of a Technical Review Committee (TRC)

As part of the program's strategy of strengthening collaborating with regional level partners and to facilitate program implementation and phase out, THSP has created a Technical Review Committee (TRC). The purpose of the TRC is to function as an advisory body that ensures consensus on the technical aspects of the project; validates the tools selected for use; and assures quality of services offered.
The Committee is made up of the following partners:

- Chief Medical Officer, District of Tambacounda
- Chief Medical Officer, District of Koumpemtoum
- Director of the Regional Training Center
- Senior Midwife, District Tambacounda
- Senior Midwife Region of Tambacounda
- Health Education Officer District of Tambacounda
- Coordinator Africare *PARINS* project
- IEC/BCC Specialist THSP
- Maternal and child Health Advisor THSP
- Program Coordinator THSP

The TRC is jointly chaired by the Program Coordinator and the two District Chief Medical Officers, and has agreed to meet at least once every quarter in the first year, as well as whenever it is required to review training or IEC/BCC materials. Members agreed during the first meeting to divide into two groups, one to review intervention related materials, the other to review communications materials. The first working session of the Committee will be on November the 8th 2004, when maternal and Child health training and IEC materials will be under review.

Other functions of the TRC will be to:

- Prepare post supervision tools;
- Determine the method and selection criteria for choosing TBAs and CHWs to work with;
- Validate the Community HIS proposed by the program team;
- Validate or adapt IEC/BCC supports for CHWs and TBAs in the context of the sociocultural realities of Tambacounda;
- Discuss and propose solutions for technical problems identified during supervision to improve the quality of service offered by implementers;
- Propose mechanisms to establish partnerships between the community and health services.

F. Identification and evaluation of community based organizations

Africare Senegal has developed a tool to evaluate CBOs with which we usually collaborate in implementing our programs. This tool, called ERO (*Evaluation Rapide des Organisations)*, is administered to each organization to evaluate its organizational capacity (structure, mode of functioning, partnership experience, management capacities and members' level of training). After administering the questionnaire to all CBOs targeted by the program, a classification occurs based on the grade given. Thus, it enables us to classify them according to:

- Non-structured organizations
- Fairly-structured organizations
- Well-structured organizations

In the case many organizations are selected in our area of intervention, the one that is the best structured is selected. This selection is done by our Community Based Intervention Supervisors (CBIS), who have been trained in the use of this tool. This activity that started in December will be finished in mid-November and all partner CBOs will be identified, with their strengths and weaknesses. The CBOs selected will provide Community Health Workers, other community actors and help to form care groups.

G. DIP Restitution

The DIP was restituted to our partners in October 2004 including those of the new District, Koumpentoum. This was the occasion to present the revised DIP content to all actors and partners, many of whom had taken part in the DIP workshop. This meeting also enabled the program to discuss the creation of a steering committee. Also, all the partners were able to review and validate all the activities planned by THSP and provide a number of recommendations.

H. Collaboration with Local Partners

Africare has also been able to elicit wide and sustained stakeholder participation during the first year of implementation. Africare has been established in the program zone since 1999 and is one of the few international development organizations that are active there. Over the past five years we have worked with several different donors to implement a series of multi-sector projects with the THSP beneficiary population. Africare's familiarity with the local actors and the culture of the program area facilitated participation during the DIP process. The DIP workshops were very animated and stakeholders had a large amount of input into the final plan. As a result, the stakeholders are today fully cognizant and supportive of the project's objectives.

Several potentials partners were identified by the THSP. These partners include:

- Local collectivities (rural and municipal councils)
- Governmental Services:
    1. Family and national solidarity departmental services (GOS)
    2. Rural expansion centers (GOS)
    3. Youth departmental center (GOS)
- Federation of Women's Groups
    1. Federation of women's promotion groups
    2. Federation of women's promotion
    3. Association of elected women (Counselors)

During the first year, these partners collaborated on the following activities:

- Provide list of CBOs in Tambacounda administrative district
- Baseline surveys
- Joint Review of the detailed implementation plan and refining of project goals and objectives
- DIP restitution workshop

More recently the THSP team (Project Coordinator Ikupa Akim, MCH Advisor Kany Sall Diop, Supervisor Kandara Seck, and Supervisor Amadou Lamin Diallo) have visited all four *arrondissements* of the Tambacounda department and met with the Sub-Prefects, Heads of Health Posts and Heads of CERP (*Centre D'éxpansion Rurale*) in Koussanar, Koumpentoum, Maka and Missirah. The team presented a brief summary of the project objectives, areas of intervention and operation, and proposed plan of action. In turn the district teams gave brief feedback on how they saw the project fitting in with their development activities and also requested assistance in areas of particular need. These meetings, as well as meetings with the Prefect of Tambacounda, Regional Medical Officer, and District Medical Officers, have

paved the way for a smooth entry of project staff into communities. Project staff members have held several meetings with women's groups in Tambacounda Commune and the Missirah Arrondissement to discuss collaboration, selection of CHWs and formation of care groups. These meetings will continue over the next few weeks in the other target areas.

During the DIP restitution workshop, the prefect of Tambacounda emphasized that this was the first time an NGO implementing a project in the department of Tambacounda had taken the time to present its detailed work plan to such a wide representation of GOS, community and NGO partners. This was also the first time that stakeholders were given the opportunity to comment on and provide input to the plan. The proposed Steering Committee also met with widespread approval at the workshop.

I. Receipt of Matching Funds to Complement THSP

Another accomplishment has been Africare's ability to attract matching funds to support program objectives. During the first program year, Africare received a two-year matching grant for child nutrition activities in the community of Tambacounda from the Government of Senegal and the World Bank. These activities have begun and are providing additional support to THSP. This year, Africare also received a grant from the Japanese International Cooperation Agency (JICA) for the construction and equipment of six health huts in the program zone. The health huts were inaugurated in June and are fully functional in support of the THSP program.

J. Progress Towards Achieving Objectives

PROGRAM OBJECTIVES/ACTIVITIES	ON TARGET	COMMENTS
Objective 1: Increase the access to, demand for, and use of quality maternal and child health services, including emergency care.		
Meet with women's groups to organize maternal care groups	Yes	Due to incomplete data related to villages, THSP has started re-censoring the villages to help with selection, meeting with rural community leaders, village leaders, women groups and having discussions on formation of these groups. The formation of Care Groups will thus be a gradual process, involving several discussions with different actors in the village. It will also very much depend on the availability of women because of the rainy season (May-August) Activity is planned to start in December 2004
Develop contribution system for maternal care groups	Yes	Once care groups are formed, this activity will be the first to be implemented Activity is planned to start in December 2004 and be phased in over the next year.
Implement IEC/BCC activities (theater, group discussions)	Yes	Activity will start in January 2005; The procurement of the IEC Material is in process. Africare already met with BASICS and made formal request for IEC materiel (MNH, malaria, nutrition, CDD), which will be delivered before the end of November. These IEC materials were developed on a consensus basis following a process during which

PROGRAM OBJECTIVES/ACTIVITIES	ON TARGET	COMMENTS
		several organizations contributed including Africare Senegal.
Train 12 trainers in reproductive health, family planning, IEC/BCC	Yes	Activity will start in November 2004. Modules including data collection tools are in process of being finalized by the Technical Review Committee set up by THSP.
Train 400 CHWs in reproductive health, family planning, IEC/BCC	Yes	An initial 150 CHWs will be trained. The 12 trainers selected from the 2 districts will facilitate training. The balance of 250 CHWs will be trained in the 3rd yr of the program
Train 12 trainers in life saving skills	No	Due to time constraints, this activity was not accomplished. The TRC will evaluate this activity during its next meeting and make recommendations on its feasibility.
Train 200 TBAs in saving life skills	Yes	In the upcoming year 100 TBAs will be trained in SLS (February-March 2005). This training will be directly facilitated by the Coordinators of RH of the 2 district
Organize exchange visit to Kebemer (MCH pilot site) for district and program staff	No	Due to incompatible schedules and time constraints, the project staff has been unable to conduct this activity. The team plans to conduct this activity before the end of quarter two of year 2.
Organize exchange visit to CCF/CANAH CS program for district, program staff and CBOs	Yes	This exchange visit is re- scheduled for December 2004
Objective 2: Improve case management of malaria for pregnant women and children under five at the community and health post levels.		
Train 12 trainers in malaria case		Include in the C-IMCI

PROGRAM OBJECTIVES/ACTIVITIES	ON TARGET	COMMENTS
management, danger signs and care seeking.	Yes!	
Train 400 CHWs in malaria case management, danger signs and care seeking.	Yes!	Include in the C-IMCI
Train 12 trainers in C-IMCI	Yes	Malaria case management, CDD and nutrition are included in the IMCI training planned for November – December 2004
Train 150 CHWs in C-IMCI	Yes	Malaria case management, CDD and nutrition are included in the IMCI training planned for November – December 2004
Objective 3: Improve nutrition of pregnant women and newborns, including vitamin A supplementation and the practice of exclusive breastfeeding.		
Organize community level growth monitoring activities at pilot sites	Yes	Pilot child nutrition activities under matching grant operational in the community of Tambacounda have started.
Improve the capacity of local partners to plan, implement, monitor and evaluate child survival interventions at the community and district levels, with an emphasis on capacity in maternal and newborn health, malaria, nutrition, and breastfeeding	Yes	GOS has recently divided project zone into two separate health districts, appointed new District Health Officers. GOS plans to establish a district health team and to construct a health center in the new district of Koumpentoum.
Advocate for change in protocol enabling CHWs to be trained in vaccination techniques	Yes	Activity planned to start in January 2005
Organize facility based growth monitoring activities in 27 facilities	Yes	Activity planed to start in May 2005, once CHW, TBAs, CHAs are trained and supervision is regular

PROGRAM OBJECTIVES/ACTIVITIES	ON TARGET	COMMENTS
		supervision is regular.
Objective 4: Improve diarrhea recognition and management at community and household levels.		
CBD of ORS	As of January 2005	Planned once CHWs are trained in 150 villages
Make IEC/BCC home visits to mothers and caregivers	As of January 2005	See comment above
Undertake IEC/BCC activities on diarrhea	As of January 2005	See comment above
Procure and make ORS available within care groups	As of January 2005	See comment above
Inform care groups on ORS use	As of January 2005	
Re-activate groups responsible for cleanliness within communities to improve hygiene and sanitation	As of January 2005	
Supervise IEC/BCC activities and CBD	As of January 2005	
Train 12 trainers in C-IMCI	November 2004	
Train 150 CHWs in C-IMCI	As of November 2004	
Conduct a operational research on the Zinc supplementation		Discussions held with JICA. This activity will most likely begin in the 4th quarter of year 2.
Objective 5: Improve the capacity of local partners to plan, implement, monitor and evaluate child survival interventions at the community and district levels with an emphasis maternal and neo-natal health, malaria, nutrition, breastfeeding and diarrhea.		
Organize monthly meetings between the 27 Health Posts and the 400 CHWs	Yes	Activity will start in march 2005
Organize quarterly steering	Yes	First meeting will be held on January 2005

PROGRAM OBJECTIVES/ACTIVITIES	ON TARGET	COMMENTS
committee meetings		
Create a technical committee at district level to assist program in the design of training module and validate IEC materials et HIS	Yes	This technical committee is composed of 9 persons from the 2 districts, program advisers et Africare staff.

K. Project Phase Out Plan

THSP is a capacity building program designed to mobilize and give a shared responsibility to communities, local and administrative authorities, and health personnel. It aims to accompany the pregnant woman and infants through targeted information, counseling and basic health services and training,

This initiative will strengthen communities by improving available health services, increasing awareness and individual/collective behavior change, and facilitating economic opportunities. Its relevance resides in the future capacities of communities to manage in a sustainable manner activities implemented during the life of the program. Thus the long-term objective to empower communities to take charge of all aspects related to their health and nutritional status (especially for mothers/children), from the availability of basic health services at the village/neighborhood level to appropriate referral to a higher-level health facility.

THSP is based on principles of self-sufficiency and community participation. It is designed to maximize the sustainability of each intervention after the life of the project. The population as well as the different local community organizations (women's groups, collectivities, technical and sanitation services, etc.) will be involved in the program's execution, its monitoring, and in Africare's progressive close-out (Program design, KPC, DIP).

Many factors in the program's design will increase these sustainability chances. Moreover, certain key elements in its conception will guarantee at the end the transfer of skills to the population, local collectivities as well as health personnel. These elements and factors are:

1. The community, the population, leaders (opinion and religious) and locally elected officials have and continue to play a key role in the discussions and the initial evaluation of priorities in nutrition and health. Thus, they feel ownership toward a program aiming at satisfying needs that they themselves identified, whereupon a natural motivation emerges to execute the program.

2. Women's promotion groups are already established in the areas of interventions and constitute a framework to express interests that pertain to the program's primary target. These groups, which are usually led by dynamic individuals, have a strong influence in the community and will contribute to creating the conditions for the efficient management of community health services.

3. Women's promotion groups, management committees and the other committees, who are elected democratically, will play a key role in mobilizing resources for the program, caring for the community staff and procuring the initial stock of medication (iron, vitamin A and insecticide treated nets). These groups' desire to invest in health interventions will be reinforced when the benefits and advantages of improving maternal health and primary care become clear for the communities.

4. The program's sustainability will be eased by the reasonable cost of all input. The community will be able to buy products and medication at low cost such as iron, ORS, etc. In each neighborhood, nutrition committees will continue to bear the cost of all medication that will be cheap.

5. The program will be linked to other activities that Africare undertakes in the Tambacounda region in keeping with our strategy of integrated development. This will enable the creation of a bridge between education and health, income generating activities and functional literacy. Credit will be introduced to strengthen the functioning of care groups.

6. The participation of local collectivities (rural and municipal councils), the district health team, the *infirmier chef de poste* (head nurse), the *Préfet*, and other departmental services will contribute to the sustainability because of the support and popularity they have in their various areas. The program will help expand BCC activities in villages and neighborhoods for many CHWs who will train others in their communities. At the same time, it will enable through community mobilization to spur supervision of community-based interventions.

7. The program has been designed to easily integrate current health structures. As a result, the planned interventions will contribute to improve currently offered services by emphasizing decentralization. Thus, the program's mechanism will easily be added to those of the district, paving the way for sustainability.

8. The program adheres to national and regional dynamics with a strong political will to fight infant and maternal mortality, and will become part and parcel of the important efforts undertaken by the Government of Senegal. This program will therefore be reinforced by national and regional campaigns. The messages that will be delivered will serve to support all on-going efforts in the districts of Tambacounda and Koumpentoum.

9. The training provided to the various actors will strengthen their management and organizational capacities, and therefore have a durable impact for the direct beneficiaries.

10. The addition of resources to accompany the program with income generating activities will be a determining factor in the financial sustainability of interventions. In fact, in addition to the credit granted by the program to initiate income-generating activities, women's groups are already involved in other initiatives based on past credit or savings. All these resources will help to quickly constitute solidarity funds for the care groups.

Based on all these various aspects, it was decided during the DIP restitution meeting to hold a number of meetings with the partners (districts, local collectivities, federation of women's groups, and administrative authorities) to finalize all elements related to the technical phase out.

Since 1996 the GOS has decentralized many of the responsibilities to the local rural and municipal councils, including health care delivery. This implies that it is the locally elected officials' responsibility to plan and assure the health of the population. Thus, certain activities that will be initiated with THSP will be progressively transferred to local collectivities for funding and planning in their local development plans. As a consequence, the elected officials have to be more aware of the role they play in the population's health. THSP plans to use a communication strategy to provide advocacy on implications of decentralization laws in the health realm. From these meetings with the partners and the complementary surveys, a

sustainability plan will be designed emphasizing the objectives, the activities to be held and the indicators. This plan will incorporate a phase out plan that should allow one year before the end of the project to plan activities to be transferred and the organization of the activities with the different partners. These plans will be finalized during the first quarter of THSP's second year.

III. Constraints and Opportunities

Constraint: A limiting factor during the first project year concerned Africare's difficulty in recruiting an expatriate project coordinator to live and work in the Tambacounda region. Africare interviewed a number of viable candidates and even offered the job to several applicants (who turned it down) before recruiting the present coordinator in June 2004. This active search lasted for nine months and consumed much time and effort both at Africare Washington and Africare Senegal. Until the coordinator was recruited, Africare Senegal could not hire the rest of the program team.

Actions taken to resolve constraint: While recruiting the program coordinator, Africare turned the management of the THSP over to the health program staff at the Dakar office (Health Program Manager Dr. Mor Ngom, BCC Specialist Saboye Diagne, Program Manager Gorgui Sene Diallo, Junior Program Manager Ousseynou Samb), making them fully responsible for the implementation of the program during its first nine months.

The Dakar health program team has been involved with the THSP since the pre-proposal stage and the program staff is thoroughly familiar with the requirements and guidelines of the program. The beginning of the project also coincided with the arrival of a new Africare Country Representative (Jim Dean) who for the two previous years had managed a major USAID-funded MCH project in Liberia and had most recently closed out Africare's CSP in Ghana. During this period, the Dakar team was supported by staff from the health unit at Africare headquarters and team of locally recruited consultants. The Dakar team spent many weeks in Tambacounda doing the groundwork for the DIP. The Health Program Manager from Africare Washington's Health and HIV/AIDS Unit (Kendra Blackett-Dibinga) also spent several weeks in Tambacounda during the DIP preparation process.

Africare Washington recruited the expatriate program coordinator (Ikupa Akim) in July and fielded her in August. Africare Senegal then hired the rest of the program team in July and fielded the team members in August. The early program management system (relying heavily on Dakar-based personnel) has now been replaced by the system that is described in section VII below. The new system is presently fully operational in the field and the entire program team is at work.

Constraint: After the KPC and prior to the first DIP workshop, the District Medical Officer (DMO) addressed a letter to Africare requesting the use of a project vehicle and other material inputs for the district health office. The DMO's position was that since the program was to be implemented through the district health office, that office should benefit from program resources. As this letter was also copied to the Prefet of Tambacounda, THSP staff has been unable until recently, to get the administrative go ahead to work with health staff or other community level personnel.

Actions taken to resolve constraint: Despite the DMO's participation in the preparation of the program proposal and the KPC, it was obvious that communication concerning the

program's management system and its implementation strategy has not been sufficiently clear. The Country Representative met with the DMO and his administrative superior, the *préfet* of the department of Tambacounda, to review the roles and responsibilities of each partner in the implementation of the program. He explained that THSP was essentially a capacity building project and could not underwrite the operational costs of the district medical office. However, Africare is actively seeking matching grants that will provide additional resources to the district medical offices (Tambacounda and Koumpentoum). These matching funds will facilitate supervisory visits, outreach activities, and help to resolve transportation constraints during obstetric emergencies. He also proposed holding the DIP restitution with all partners to share the work plan and activities that had been retained.

Constraint: In July, the GOS made the decision to divide the program's zone of intervention into separate health districts. While a DMO has been appointed for the new health district of Koupentoum, the office still lacks staff, office space, and vehicles. At the same time, the Tambacounda DMO was reassigned to head up the National Tuberculosis Program. The new DMO for Tambacounda has been appointed but has not yet begun his tour of duty.

Actions taken to resolve constraint: The Country Representative and the Program Coordinator met with the MOH's Director of Health to obtain further information concerning the MOH's plans to organize the new health district. The Program Coordinator is already working with both of the new DMOs, and they both participated in the DIP restitution in October.

Opportunities: The establishment of the THSP has provided a framework for investment by other donors in maternal and child health activities in the Tambacounda region. Africare has held several discussions with UNICEF and JICA regarding possible collaborations with the THSP. The Japanese seem interested in funding operations research for zinc supplementation for CDD. This operations research might eventually lead to an MOH protocol regarding zinc and the integration of zinc supplementation into Senegal's CDD strategy.

IV. Areas of technical assistance required

Africare will require technical assistance on the THSP program in the following areas:

- LQAS for the mid-term evaluation
- Capacity building in CSSA

V. Changes from the program description and DIP that will require a modification to the Cooperative Agreement

Thus far there are no changes that would require a modification to the cooperative agreement.

VI. Issues Raised during the DIP Review

A. Inclusion of CDD as a Separate Intervention with its own Activities and Indicators

This was addressed above.

B. Formative Research to be Conducted Regarding the Transport of Women with Obstetric Emergencies

The Africare team has been collaborating with the local women's groups to talk of this issue and come up with a contribution scheme to ensure that women have timely access to transport in the case of obstetric emergencies. Discussions held so far have emphasized the importance of identifying at risk pregnancies early, and then organizing transportation at the ready for the woman or ensuring that she is brought closer to the service early enough. This means having the pregnant woman and her companion her travel out a week or two before her due date to Tambacounda or Koumpentoum. The program will then work with the district to provide outreach consultations by midwives during regular supervision visits. In this way midwives would then be able to identify the at risk pregnancies in good time. Chariot ambulances will be used for emergency cases that occur during home or health hut delivery. The care groups will provide funds for transportation and accommodation. The program will work to promote the formation of Care Groups around a development or income generating such as goat keeping. During recent visits to some proposed target villages, the program team learned that Womens Groups were sponsoring "one woman, one goat" projects in the Koussanar Arrondissement.

C. TBA Involvement in the Program Based on Discussions with Community Partners

The CNSR (National Service for Reproductive Health) has decreed that only qualified personnel (i.e. Doctor, Midwife or a Nurse) can assist a birth. In Tambacounda there is a shortage of qualified personnel: only 4 doctors, 7 midwifes and 30 nurses serve both health districts. This is a major constraint to the reduction of maternal mortality. The reality is that trained TBAs do assist in uncomplicated births. The program will provide the TBAs with training on danger signs, importance of ANC, importance of adherence to supplementation and preventive treatment during pregnancy, and postpartum care. TBAs will identify pregnant women, follow-up them up in care groups, ensure that women are they are taking their medication. TBAs will also assist in uncomplicated births, and will be trained on to detect danger signs that necessitate immediate evacuation. After birth, the TBAs role will be to follow-up the mother and infant for the first 42 days after the birth. They will also be equipped to recognize danger signs and refer the mother and child immediately should they perceive a problem. They will also promote exclusive breastfeeding, good weaning practices, nutrition of the pregnant woman and use of ITNs by pregnant women and infants.

D. Iron and Vitamin A Distribution

Within the context of THSP, the project will procure iron folate for community-based distribution. Iron tablets will be available through the maternal care groups and with the community health workers to improve the nutritional status of pregnant women in the project area. Community health workers and TBAs will also be trained on the importance of iron supplementation for pregnant women and will be responsible for sensitizing communities on its use.

Iron distribution essentially targets pregnant women. It is advised that pregnant women go to health structures for prenatal care at least 4 times during their pregnancy. The prenatal care is composed of a whole package of consultations, the supervised intake of SP by a health agent twice during pregnancy for IPT, iron for the duration of the pregnancy up to two months after delivery. SP is free for pregnant women attending the health structure while iron is not and

can be purchased in any health structure. To make the medications available to women in our area of interventions, TBAs and CHWs will sell them at a cost to be determined in consultation with the local village health committees.

Vitamin A distribution targets children aged 6 to 59 months and breastfeeding mothers. Vitamin A is currently part of the national protocol for the country's EPI. The Health Facility Assessment uncovered a number of bottlenecks for the inclusion of Vitamin A during the advanced strategies. Our report indicates that in many instances, Vitamin A was not given. However, in the context of THSP, the project will provide logistical support to the Tambacounda and Koumpentoum Districts in the procurement of Vitamin A and through the maternal care groups and the CHWs the project will help the district health team to ensure that post-partum women and children under 5 are reached with Vitamin A supplementation during the advanced strategies.

- For pregnant women

The vitamin (200,000 UI) is recommended as early as possible in the 42 days following the delivery. The TBAs will ensure distribution to those giving birth. This is the case of a routine administration.

- For children

The administration of vitamin A is done routinely either during local days of micronutrients organized the MOH with the districts. In all the cases, the distribution is ensured by CHWs or volunteers recruited for the occasion (usually once every semester in June or December). The intake is recorded on growth monitoring cards for each child.

The doses given orally every 6 months are 100,000 UI for children 6 to 11 months and 200,000 UI for children 12 months and older.

Supply of these Iron and vitamin A is done at the district level (either at the district pharmacy or the health post pharmacy that covers the area of intervention). The management of these products is ensured by committees that have been set up and are usually made up of community members living in the area. The committees are either called 'Village Health Committee' for communities that have a health hut, or 'Nutrition and Health Committee' for areas that do not have a health hut. The program's community health workers will liaise with these committees for the regular and consistent supply of vitamin A and iron supplements at the community level. They will be integral in the administration of the community-based distribution component of THSP.

E. Support of the Project Coordinator for THSP
This is discussed in more detail in the next section, Program Management.

VII. Program Management

A. Financial Management System

The program team, located at the Africare Tambacounda office, develops a monthly line item budget request for program activities that is then sent to Africare Dakar. The technical team at Africare Dakar reviews the request and compares it with the work plan. If the request is

approved Africare Dakar transfers the requested amount form the THSP account in Dakar to the program account in Tambacounda. The program coordinator in Tambacounda signs the checks in payment of all program goods and services.

The monthly project accounting is computerized and forwarded electronically to the Dakar office by the first week of the following month. Hard copies of all receipts and vouchers are also sent. The Africare Dakar accounting office enters its program expenditures into the monthly accounting and then prepares a monthly batch (hard copies) of all program field expenditures. That batch is sent to Africare Washington via DHL by the fifteenth of the following month.

At Africare Washington, the Office of Finance reviews the vouchers, adds any headquarters expenditures and enters the total monthly expenditures into the program's general ledger. On a monthly basis, the Office of Finance reviews fund transfer requests, petty cash and checking payments, petty cash and check disbursement vouchers, charges against expenditure accounts and line item budgets, issuances of advances, and settlement of accounts receivable. Program expenditures are thus tracked at three successive levels: against the monthly activity budget in Tambacounda, against the overall field budget in Dakar and against the combined field and headquarters budget in Washington.

Africare's Office of Management Services in Washington reviews program recording, the management and use of program and office equipment and supplies, vehicle use, and employee time and attendance records. Africare headquarters provides feedback and specific guidance to the Country Representative and the Program Coordinator as a result of these reviews, to reinforce correct administrative and management practices, and to advise and assist with any needed improvements.

B. Human Resources

Tambacounda: The Program Coordinator, Ms. Ikupa Akim is located at Africare's Tambacounda office. She is responsible for overall program management in the field and the supervision of the rest of the team, including:

- The Maternal Health Advisor, Mme Kany Sall Diop has twenty years of experience as a nurse-midwife and a supervisor in the Tambacounda health district.
- The BCC/IEC Advisor, Mr. Saboye Diagne has five years of experience designing and implementing IEC/BCC strategies with Africare Senegal.
- Three supervisors, one of whom, Amadou Diawara, has three years of experience as a supervisor for Africare Senegal in the Tambacounda health district.

Africare has also dedicated a 60 percent level of effort for both the Tambacounda office administrator and the office secretary to the THSP.

Dakar: The Dakar team is headed by Country Representative Jim Dean, an anthropologist with over twelve years of experience in managing major USAID development projects. The rest of the team assisting THSP includes:

- The Health Program Manager, Dr. Mor Ngom, a medical doctor with four years' experience managing health projects for Africare Senegal. Previously he had worked for eight years as a DMO in various rural areas of Senegal.

- Program Manager Gorgui Sène Diallo has ten years of experience backstopping and managing projects for Africare Senegal. Mr. Diallo specializes in project monitoring and evaluation and development project information systems.
- Assistant Program Manager Ousseynou Samb is a graduate of Ohio University, with a masters' degree in International Affairs. He has worked as a project manager for Africare Senegal for three years.

Washington: Africare's Francophone Regional Office, located in Washington, D.C. provides the primary operational support to the program. One of Africare's three Regional Directors, Mr. Myron Golden, runs this office with the assistance of a four-member team. The Regional Office is responsible for coordinating the technical and managerial inputs of the program.

In collaboration with the Dakar office, Africare's Health and HIV/AIDS Unit is the primary source of technical support to the program. The Health Unit is a five-member technical team of health professionals that assists the headquarters regional offices by providing direct technical support to projects and programs in the field. Mr. Charles De Bose, the unit's director, is a seasoned health professional with many years of experience working in the health sector in Senegal. The THSP's designated Health Program Manager, Ms. Kendra Blackett-Dibinga, has an MPH and has lived and worked in Senegal. She speaks fluent French and Wolof. Africare HQ will work very closely with the THSP team over the next few years to provide technical guidance in areas identified by project staff. To date, the Office of Health and HIV/AIDS has had regular contact with the field office in the initial implementation of project activities.

C. Communications System

Africare is in the process of installing a LAN at the Tambacounda office to link the computers of the THSP staff. Since the telephone lines are frequently down in Tambacounda, Africare has issued cell phones to THSP staff. Africare is also in the process of providing the same high-speed Internet service that is presently installed at the Dakar office for more efficient e-mail communication. The PC in Tambacounda, the CR in Dakar, and the HPM in Washington exchange frequent e-mails and talk on the phone on the several times a week. The PC files a weekly progress report with the CR, who includes relevant news about the program in his weekly report to headquarters.

Internally, the PC meets with her staff on a weekly basis ever Monday morning. The THSP staff also meet once every two weeks with the program staff of Africare Tambacounda's two other health projects: the PARINS Child Nutrition Project, financed by the World Bank, and the Maka Community Health Project, financed by JICA. The PC also meets on a weekly basis with both DMOs (Tambacounda and Koupentoum). At least one member of the Dakar team visits Tambacounda every two weeks, and the CR visits once per month.

D. Team Development

The program's strategy for team development will place emphasis on each member understanding the program globally and being able to represent the program to partners. To foster this understanding, the THSP team will spend three days on a team building exercise, facilitated by an expert on organizational development and capacity building. Topics addressed during this exercise will include the importance of communication, planning and

roles and responsibilities. In addition to this, participatory development of work plans for all staff, regular meetings and constant feedback will provide staff members with many opportunities to contribute and learn from the program.

VIII. Year 2 Work Plan

Objective#1: Increase access to, demand for, and use of quality maternal and child health services.					
Indicator #1: Percentage of women making at least three ANC visits. Benchmark: 33%. Target: 60% (KPC: BL, FE.LQAS: ME) **Indicator #2:** Percentage of deliveries attended by skilled birth attendants. Benchmark: 45% Target: 60% (KPC: BL, FE. LQAS: ME) **Indicator #3:** Percentage of newborns breastfed during the first hour after birth. Benchmark: 20% Target: 30% (KPC, LQAS) **Indicator #4:** Percentage of women using a least one modern method of contraception. Benchmark: 10% Target: 13% (KPC, LQAS)					
Major Activities	**Activity Focus**	**Time Frame**	**Responsible**	**Benchmarks/Targets**	**Status/Comment**
Household					
Distribute iron to pregnant women	A	Starting March 2005	CHWs	Iron available and accessible for pregnant women in at least 150 communities	
Make IEC/BCC home visits to pregnant women	BC	Starting January 2005	CHWs	The 150 trained CHWs make the home visits.	
Community					
Meet with women's groups to organize maternal care groups	A, BC	December 2004 - December 2005	Africare CBOs	At least 150 groups are constituted	
Develop contribution mechanisms for maternal care groups	A	December 2004 - December 2005	Africare CBO	A contribution mechanism works in each of the 150 care group	
Procure initial stock of iron and Vitamin A	A	December 2004 – February 2005	Africare CBO Management committees Populations	Iron and Vitamin A procured for 150 communities	For the procurement of the initial stock in villages where there is no functioning health hut, the community will contribute to the procurement of this initial stock.

Objective#1: Increase access to, demand for, and use of quality maternal and child health services.					
Indicator #1: Percentage of women making at least three ANC visits. Benchmark: 33%. Target: 60% (KPC: BL, FE.LQAS: ME) **Indicator #2:** Percentage of deliveries attended by skilled birth attendants. Benchmark: 45% Target: 60% (KPC: BL, FE. LQAS: ME) **Indicator #3:** Percentage of newborns breastfed during the first hour after birth. Benchmark: 20% Target: 30% (KPC, LQAS) **Indicator #4:** Percentage of women using a least one modern method of contraception. Benchmark: 10% Target: 13% (KPC, LQAS)					
Major Activities	**Activity Focus**	**Time Frame**	**Responsible**	**Benchmarks/Targets**	**Status/Comment**
Procure hygiene kits for safe and clean births	A	Starting August 2005	CBO	Hygiene kits are available for at least 150 care group	
Procure birthing kits for TBAs	Q	March – September 2005	Africare DHT Unicef JICA	Birthing kits procured and distributed to at least 100 trained TBAs	Birthing kits will be procured through partnership with Unicef, the districts and the Reproductive Health Division
Develop referral and transport system within each community	A, Q	Starting June 2005	Africare DHT CBO Collectivities Population	Referral and Transport system established and functioning within 150 communities	This system will be implemented by studying the constraints in each village. Meetings will be held with local authorities and communities.
Implement IEC/BCC activities (theater, group discussions)	BC	Starting January 2005	CHWs	At least 150 CHWs regularly conducting IEC/BCC activities as per activity log	A BCC plan, based on the upcoming qualitative surveys, is being developed by THSP
Conduct Operations Research on delays and relative importance	A, Q	December 2004	Africare DHT	OR conducted with insight into main delays in seeking care	
Health Facility					
Supervise TBAs	Q	Starting March 2005	ICP	At least 100 TBAs are regularly supervised	
District					

Objective#1: Increase access to, demand for, and use of quality maternal and child health services.					
Indicator #1: Percentage of women making at least three ANC visits. Benchmark: 33%. Target: 60% (KPC: BL, FE.LQAS: ME) **Indicator #2:** Percentage of deliveries attended by skilled birth attendants. Benchmark: 45% Target: 60% (KPC: BL, FE. LQAS: ME) **Indicator #3:** Percentage of newborns breastfed during the first hour after birth. Benchmark: 20% Target: 30% (KPC, LQAS) **Indicator #4:** Percentage of women using a least one modern method of contraception. Benchmark: 10% Target: 13% (KPC, LQAS)					
Major Activities	**Activity Focus**	**Time Frame**	**Responsible**	**Benchmarks/Targets**	**Status/Comment**
Train 12 trainers in reproductive health, family planning, IEC/BCC	A	November – December 2004	Africare Technical committee DHT RHT	12 trainers trained in two districts	THSP has created a technical design committee to develop training modules. This committee is made up of 9 members including staff from two districts, regional health team, counselors of THSP and an Africare staff member specialist in nutrition and C-IMCI
Train 100 TBAs in saving life skills	A, Q	February – March 2005	Africare Technical committee DHT	100 TBAs trained in Life Saving Skills	
Train/Recycle 150 CHWs in communication techniques in Reproductive health	A, Q	December 2004 – January 2005	Africare Districts	150 CHWs trained	

Objective#1: Increase access to, demand for, and use of quality maternal and child health services.					
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Major Activities	**Activity Focus**	**Time Frame**	**Responsible**	**Benchmarks/Targets**	**Status/Comment**
Train/Recycle 6 health agents in prenatal consultation/ EOC	A, Q	Starting April 2005	Districts Africare	6 ICP trained in EOC	Only the 6 ICP that have not been trained are considered
Train 50 counselors in counseling/FP	CC	Starting June 2005	Districts Africare	50 counselors trained for advocacy	
Train 100 elected officials in RH	CC	Starting June 2005	Districts Africare	100 elected officials trained for advocacy	THSP will train locally elected officials to undertake advocacy activities for a better implication of authorities in enacting budget with a strong emphasis on health issues
Train 10 new ICP on the new contraceptive technology and FP	A, Q	May – June 2005	Districts Africare	10 ICP trained	Only 10 ICP have not been trained
Supervise TBAs & CHWs	Q	Starting March 2005	Districts Africare	At least 100 TBAs are regularly supervised	

Objective#2: Improve case management of malaria at the community and health post levels

Indicator #1: Percentage of pregnant women with access to IPT. Benchmark: 2% Target: 60% (KPC: BL, FE. LQAS: ME)
Indicator #2: Percentage of caregivers recognizing severe danger signs of malaria and seeking appropriate care within 24 hours. Benchmark: 48% Target: 60% (KPC: BL, FE. LQAS: ME)
Indicator #3: Percentage use of ITNs among pregnant women. Benchmark: 18% Target: 50% (KPC: BL, FE. LQAS: ME.)
Indicator #4: Percentage use of ITNs by children<2. Benchmark: 21% Target: 50% (KPC: BL, FE. LQAS: ME.)

Major Activities	Activity Focus	Time Frame	Responsible	Benchmarks/Targets	Status/Comment
Household					
Make IEC/BCC home visits to mothers and caregivers	BC	Starting January 2005	CHW	IEC/BCC home visits organize in at least 150 communities	Based on BCC plan developed by THSP
Community					
Create 20 units for sale and treatment of ITNs	A, Q	April – September 2005	Africare CBOs	20 units for re-treatment of bed nets created	
Procure an initial stock of ITNs	A	Starting April 2005	Africare CBO HMC	Initial stock of ITNs procured for CBD in at least 150 communities	
Establish revolving funds for CBD of ITNs in each CBO	A	March – December 2005	Africare CBOs	Revolving funds for CBD created and functioning for at least 150 CBOs	
Implement IEC/BCC activities (theater, group discussions)	BC	Starting January 2005	CHWs Africare	CHWs regularly conducting IEC/BCC activities as per activity log	Based on BCC plan developed by THSP
Health Facility					
Supervise IEC/BCC activities	BC	Starting March 2005	ICP Africare	At least 150 CHWs are regularly supervised	
District					
Train 12 trainers in C-IMCI	Q, BC	November – December 2004	Districts Africare	12 trainers trained in C-IMCI	

Objective#2: Improve case management of malaria at the community and health post levels					
Indicator #1: Percentage of pregnant women with access to IPT. Benchmark: 2% Target: 60% (KPC: BL, FE. LQAS: ME) **Indicator #2**: Percentage of caregivers recognizing severe danger signs of malaria and seeking appropriate care within 24 hours. Benchmark: 48% Target: 60% (KPC: BL, FE. LQAS: ME) **Indicator #3:** Percentage use of ITNs among pregnant women. Benchmark: 18% Target: 50% (KPC: BL, FE. LQAS: ME.) **Indicator #4:** Percentage use of ITNs by children<2. Benchmark: 21% Target: 50% (KPC: BL, FE. LQAS: ME.)					
Major Activities	**Activity Focus**	**Time Frame**	**Responsible**	**Benchmarks/Targets**	**Status/Comment**
Train 150 CHWs in C-IMCI	Q, BC	January – March 2005	Africare District	150 CHWs trained in C-IMCI	
Train 60 CBO members in ITN retreatment techniques	A, Q	May - July 2005	Districts	60 CBOs members trained in ITN re-treatment techniques	
Organize an exchange workshop with 50 traditional healers on the treatment of malaria	BC	February 2005	Africare District Health Team	50 TH targeted by the exchange workshop	

Objective#3: Improve nutrition of women and children, including Vitamin A supplementation and exclusive breastfeeding.					
Indicator #1: Percentage of mothers practicing exclusive breastfeeding for six months. Benchmark: 24% Target: 30% (KPC: BL, FE. LQAS: ME.) **Indicator #2**: Percentage of mothers taking vitamin A forty-two days after delivery. Benchmark: 11% Target: 60% (KPC: BL, FE. LQAS: ME.) **Indicator #3:** Percentage of children 6-23 months of age receiving vitamin A supplementation in the previous six months. Benchmark: 40% Target: 80% (KPC: BL, FE. LQAS: ME.) **Indicator #4:** Percentage of households using iodized salts. Benchmark: 49%. Target: 70% (KPC, LQAS, ME, FE)					
Household					
Make IEC activities to promote utilization of iodized salt in households	BC	Starting March 2005	CHWs TBAs Africare	At least 150 CHWs conducting IEC/BCC activities regularly among the maternal care groups	
Make IEC activities to promote exclusive breastfeeding	BC	Starting March 2005	CHWs TBA Africare	At least 150 CHWs conducting IEC/BCC activities regularly among the maternal care groups	
Community					
Organize community demonstrations of proper weaning food preparation	BC	Starting September 2005	Africare CBOs	At least 1 Monthly demonstration organize by each of the 150 care groups held	
Assist women's groups in accessing micro-credit for nutritional activities	A	Starting March – December 2005	Africare CBOs	Micro-credit is accessible for at least 150 women's groups	
Organize community level for growth monitoring activities at pilot sites	A, Q, BC	Starting January 2005	CHWs CBOs Africare	Growth monitoring activities are organize on monthly basis in at least 43 pilot communities	
Organize CBD of Vitamin A	A	Starting February 2005	CHWs Africare	Vitamin A available in at least in 150 communities	
Health Facility					

Objective#3: Improve nutrition of women and children, including Vitamin A supplementation and exclusive breastfeeding.					
Indicator #1: Percentage of mothers practicing exclusive breastfeeding for six months. Benchmark: 24% Target: 30% (KPC: BL, FE. LQAS: ME.) **Indicator #2**: Percentage of mothers taking vitamin A forty-two days after delivery. Benchmark: 11% Target: 60% (KPC: BL, FE. LQAS: ME.) **Indicator #3:** Percentage of children 6-23 months of age receiving vitamin A supplementation in the previous six months. Benchmark: 40% Target: 80% (KPC: BL, FE. LQAS: ME.) **Indicator #4:** Percentage of households using iodized salts. Benchmark: 49%. Target: 70% (KPC, LQAS, ME, FE)					
Organize facility based growth monitoring activities in 27 facilities	A	Starting May 2005	ICP Africare Districts	Growth monitoring regularly organize in 27 health facilities	
Supervise IEC/BCC activities and growth monitoring sessions	Q	Starting March 2005	ICP	150 CHWs and 100 TBAs regularly supervised	
District					
Train 12 trainers in C-IMCI	Q, BC	November – December 2004	Districts Africare	12 trainers trained in C-IMCI	
Train 150 CHWs in C-IMCI	Q, BC	January – March 2005	Africare District	150 CHWs trained in C-IMCI	
Advocate for a protocol change allowing community health agents to be trained in vaccination techniques	A, Q	January 2005	Districts Africare	Policy changed authorizing community health agents (CHA) to immunize	All this CHA are working in the health facilities and regularly assist Health Agent in immunization
Train 30 community health agents in vaccination techniques	A, Q	Depends on preview activity	Districts	30 CHA trained in immunization techniques	

Objective#4: Improve home-based care of diarrhea

Indicator #1: Percentage of children aged 0-23 with diarrhea in last two weeks who received ORS and/or recommended home fluids (RHF). Benchmark: 52% Target: 65%

Indicator #2: Percentage of children aged 0-23 months with diarrhea in the last two weeks who were offered more fluids during the illness. Benchmark: 48% Target: 60%

Indicator #3: Percentage of children aged 0-23 months with diarrhea in the last two weeks who were offered the same amount or more foods during the illness. Benchmark: 48% Target: 60%

Indicator #4: Percentage of children 0 – 23 months with diarrhea in the last two weeks whose mothers sought outside advice or treatment for the illness. Benchmark: 31% Target: 50%

Indicator #5: Percentage of mothers who usually wash their hands with soap or ash before food preparation, before feeding children, after defecation, and after attending to a child who has defecated. Benchmark: 7,3% Target: 50%

Major Activities	Activity Focus	Time Frame	Responsible	Benchmarks/Targets	Status/Comment
Household					
CBD of ORS	A, Q	Starting March 2005	CHWs Africare	ORS available and accessible in at least 150 communities	
Make IEC/BCC home visits to mothers and caregivers	BC	Starting January 2005	CHWs CBOs Africare	Home visit organize in 150 communities	
Community					
Undertake IEC/BCC activities on diarrhea	BC	Starting January 2005	CHWs CBOs Africare	IEC/BCC undertook in the 150 targeted communities	
Procure and make ORS available within care groups	A	February 2005	Africare CBOs Communities Districts	ORS available and accessible in at least 150 communities	
Inform care groups on ORS use	A, Q, BC	January 2005	CHWs Africare	At least 150 Care group inform on ORS use	
Create groups	A, Q	Starting February 2005	CBOs	At least 150 Groups for	

Objective#4: Improve home-based care of diarrhea					
Indicator #1: Percentage of children aged 0-23 with diarrhea in last two weeks who received ORS and/or recommended home fluids (RHF). Benchmark: 52% Target: 65% **Indicator #2**: Percentage of children aged 0-23 months with diarrhea in the last two weeks who were offered more fluids during the illness. Benchmark: 48% Target: 60% **Indicator #3**: Percentage of children aged 0-23 months with diarrhea in the last two weeks who were offered the same amount or more foods during the illness. Benchmark: 48% Target: 60% **Indicator #4**: Percentage of children 0 – 23 months with diarrhea in the last two weeks whose mothers sought outside advice or treatment for the illness. Benchmark: 31% Target: 50% **Indicator #5**: Percentage of mothers who usually wash their hands with soap or ash before food preparation, before feeding children, after defecation, and after attending to a child who has defecated. Benchmark: 7,3% Target: 50%					
Major Activities	**Activity Focus**	**Time Frame**	**Responsible**	**Benchmarks/Targets**	**Status/Comment**
responsible for cleanliness within communities to improve hygiene and sanitation			Africare	cleanliness created et functional	
Health Facility					
Supervise IEC/BCC activities and CBD	Q	Starting March 2005	Africare ICP Districts	150 CHWs and 100 TBAs regularly supervised	
Districts					
Train 12 trainers in C-IMCI	Q, BC	November – December 2004	Districts Africare	12 trainers trained in C-IMCI	
Train 150 CHWs in C-IMCI	Q, BC	January – March 2005	Africare District	150 CHWs trained in C-IMCI	
Conduct a operational research on the Zinc supplementation	Q	Starting April 2005	Africare District	Operational research conduct within 15 months	

Objective#5: Improve the capacity of local partners to plan, implement, monitor and evaluate child survival interventions at the community and district levels with an emphasis maternal and neo-natal health, malaria, nutrition, breastfeeding and diarrhea.					
Indicator #1: Partner has capacity to conduct CBO training **Indicator #2**: Partner has capacity to supervise and strengthen community-based activities. **Indicator #3**: Women's groups are planning and undertaking increased health and development initiatives.					
Major Activities	**Activity Focus**	**Time Frame**	**Personnel**	**Benchmarks/Targets**	**Status/Comment**
Community					
Train women's groups in management of credit revolving	A, Q	April - September 2005	Africare	150 CBOs trained	
Train in group dynamics, entrepreneurship and management of women's groups	Q	April – September 2005	Africare	150CBOs trained	
Develop a system of contribution for care groups	A, Q, BC	April – September 2005	Africare CBOs	150 CBOs trained	
Health facility					
Organize monthly meetings between health structures and community personnel	Q	Starting February 2005	ICP CHWs Africare	At least 8 coordination meeting held between each of the 27 health structure and CHWs & TBAs	
District					
Undertake an exchange visit with partners and THSP staff	Q	December 2004	Africare Districts CCF/CANAH	1 Exchange visit organize	
Train 30 ICP in supervision techniques	Q	April 2005	Districts Africare	30 ICP trained	

Objective#5: Improve the capacity of local partners to plan, implement, monitor and evaluate child survival interventions at the community and district levels with an emphasis maternal and neo-natal health, malaria, nutrition, breastfeeding and diarrhea.					
Indicator #1: Partner has capacity to conduct CBO training **Indicator #2**: Partner has capacity to supervise and strengthen community-based activities. **Indicator #3**: Women's groups are planning and undertaking increased health and development initiatives.					
Major Activities	**Activity Focus**	**Time Frame**	**Personnel**	**Benchmarks/Targets**	**Status/Comment**
Organize quarterly meetings with the steering committee	Q	Starting March 2005	Africare Districts	3 steering committee meetings organize	
Monthly coordination meeting for monitoring and evaluation	Q	Starting March 2005	Districts Africare	At 7 coordination meeting organized with district to monitor and evaluate activities	
Set up of data collect tools (Project HIS)	Q	January – February 2005	Africare		
Set up IEC/BCC materials	Q	January – February 2005	Africare District		IEC/BCC will be procure from BASICS and UNICEF

Technical Training Maternal Health and Newborn Care, Nutrition, Malaria, CDD

THEME	DISTRICT	TARGET GROUP /	DURATION	# SESSIONS	OBSERVATIONS
C/IMCI	2 districts	12 trainers	6 days	1	
C/IMCI	2 districts	150 CHWs	8 days	5	Training include data collection
Train/Recycle 150 CHWs in communication techniques in Reproductive health	2 districts	150 CHWs	5 days	5	Training include data collection
Saving Life Skills	2 districts	100 TBAs	10 days	4	"Saving Life Skills" Module; Theory and practice of child birth; clean and safe deliveries; Importance of prenatal care; identification of complications; Importance of TT, iron folate, vitamin A; protocols for supplementation; schedule. Training include data collection
Counseling on FP	2 districts	50 Community Health Agents at health facilities	6 days	2	Community Health Agents based in the health facilities are trained to conduct basic counseling on FP
Supervision techniques	2 districts	30 Health agents	3 days	1	
EOC	2 districts	6 Health agents	6 days	1	
New contraceptive method	2 districts	10 Health agents	6 days	1	
Impregnated Mosquito net use, value, sales, treatment; other, insecticide treated materials.	2 districts	60 CBO members	2 days	2	
General Information on prevention and treatment of Malaria and TB; integration of Traditional Healers; Referral	2 districts	50 Traditional Healers	2 days	7	Use of traditional healers is common for initial care seeking; these individuals must recognize severe signs of illness and have a collaborative relationship with health facilities in order to refer to cases.

Capacity Building activities for Community Based Organizations (CBOs)

THEME	PARTNER	TARGET NUMBER	DURATION	# SESSIONS	OBSERVATIONS
Train women's groups in management of credit revolving	CBOs	150	3 days	4	Africare personnel (3 specialists will conduct training)
Group Dynamics	Health Committees & CBOs	150	2 days	4	

IX. HIGHLIGHTS

The THSP is a capacity building project that seeks to involve the target communities in mother and child health activities, by increasing awareness and creating linkages. One of the program's innovations is based on a traditional principle of solidarity among village women: the project seeks to build on these solidarity mechanisms to create care groups that will improve community management of pregnancy, childbirth and newborn health.

Africare's surveys among women's groups in the area have revealed that:

- Solidarity among women in the Tambacounda region does exist and is traditionally expressed at childbirth and during the baptism ceremony that takes place on the eighth day after birth. All of the women who belong to the group express their solidarity by giving the new mother money, soap, food or other gifts.
- Most women's groups are organized around income-generating activities that reinforce the group's economic power. These activities are either self-initiated by the group or are part of a micro-credit scheme supported by projects funded by the GOS, ADB or the World Bank.
- Almost all of the TBAs interviewed already belonged to such a women's group.

Africare intends to build on its wide experience with micro-credit and income generation in the program area to reorient the traditional solidarity mechanisms of local women's groups to support the health of mother and child. Using a culturally based communications strategy, the THSP program will seek to convince members of the women's groups that solidarity should be expressed even before the birth of the child. The women's groups should begin their involvement with the pregnant mother and their support should continue after the birth of the child.

Each member of the group will be asked to save and contribute an amount of money that will serve as an emergency fund in the case of complications during pregnancy or childbirth. These funds would likely come from income generating activities that are supported either by existing micro-credit schemes or through micro-credit provided by Africare.

Each women's group will establish a participatory charter that will describe the duties of the women's group (providing hygienic birthing kits, providing transportation for emergencies, etc.) as well as the responsibilities of pregnant women in the group (four pre-natal visits during pregnancy, participation in focus groups concerning maternal and child health, etc.)

In the model that THSP proposes, community health workers (CHWs) will be chosen among the women's groups and will thus be members of the care groups. The CHWs will act as role models who will ensure that the rules of the charter are respected and they will also provide counseling to members. Women's groups met the concept of the care group with a great deal of interest and support during Africare's preliminary qualitative surveys of the program zone. Since the KPC and other qualitative surveys have shown that a large percentage of grandmothers are primary care-givers to young children in the program zone, THSP will be careful to involve grandmothers in the care groups as well. In a number of villages that Africare surveyed in preparation for the THSP, older women (grandmothers) have already organized themselves into "comité des sages" (wise women).

To finance the care groups, THSP will use two methods:

- Refinancing through existing credit groups belonging to the Women's Federation. The program will provide the existing groups with a credit line to finance the care groups.

Africare will sign an MOU with existing credit groups describing the credit terms (interest rates, amortization, preliminary deposit).

- The establishment of business plans that will be submitted to CNCAS (the national rural credit fund) for larger sums. Africare will guarantee 50 percent of these loans through its credit unit in Tambacounda.

In both cases, income-generating activities will be developed from a "menu" of activities that are likely to be profitable in the area. Africare will provide capacity building in enterprise development that will allow the women's groups to undertake their income-generating activities under optimal conditions.

A. Executive Summary:

Background: In response to USAID's 2003 Request for Applications (RFA) for the Child Survival and Health Grants Program, Africare submitted a proposal and was awarded a $1,499,998 grant in the standard category to implement the Tambacounda Healthy Start Program (THSP). This program is based in the Tambacounda Region of Southeastern Senegal and benefits **45,556** women of reproductive age and **40,995** children under five. The THSP seeks to 1) strengthen community-based health care services and information; 2) raise the quality of service delivery by developing life-saving skills and knowledge to manage complications during pregnancy, delivery, postpartum, and the first year of the child's life; 3) increase awareness of key health behaviors by building the capacity of CHWs and health committee members; 4) mobilize families to better prepare for and manage pregnancy, delivery, and newborn and infant care. Africare will implement the program from October 1, 2003 to September 30, 2008.

Program Location: Bordered to the north by the regions of Louga and Matam; to the south by the country of Guinea; and to the west by the regions of Kolda, Kaolack, and the country of the Gambia, Tambacounda is one of the poorest and least accessible regions of Senegal. Forty percent of the population lives below the poverty line. Low educational levels, the lack of access to financial capital, and cultural barriers (such as the low status of women) constrain economic development in the region. The town of Tambacounda itself is an eight-hour drive from Senegal's capital, Dakar. Poor road quality, low population density (averaging six inhabitants per square kilometer), and the geographic dispersion of villages contribute to marginalizing the region. The THSP targets communities and health posts in the Department ofTambacounda[1], where the majority of the region's population resides. The Department comprises the Health Districts of Tambacounda and Koumpemtoum with a population of 302,068 people dispersed over an area of 20,328 square kilometers.

Problem Statement: Almost all indicators reveal that the health situation in Tambacounda is significantly worse than the national average, and that women and children are the two most vulnerable groups. Senegal's maternal mortality rate is high (510 per 100,000 live births), but the rate in Tambacounda (720 per 100,000 live births) far exceeds the national average (DHS, HIS). Because of the poor quality of the region's health information system, the rate may have been underreported; several qualitative studies indicate that the true maternal mortality rate could be higher than the official figure. Factors that contribute to maternal mortality in the region include:

1. Low utilization of antenatal care services,
2. Extremely low rates of assisted births by skilled providers,
3. Poor management of emergency obstetric care, and
4. Lack of a functioning referral and transport system.

Tambacounda's fertility rate of 7.1 is high in comparison to the national rate of 4.93 (HIS, DHS). While the under-five mortality rate for Senegal is 145 per 1,000 births, in Tambacounda it is 181 per 1,000 births (DHS, HIS). The prevalence of low birth weight babies (25% of all live births), malaria (30% of all consultations), and diarrhea (the second leading cause of death among children under 5) are significant health problems in the region and will be targeted by the THSP (HIS).

[1] The Tambacounda Health District underwent a few administrative changes since the submission of the last DIP. With the addition of a new district, covering much of the formerly proposed project areas, Africare has decided to continue working with the two administrative units which will enable the project to reach its targets. This change is detailed more in the annual report.

Program Goal and Objectives: The goal of the THSP is to decrease the morbidity and mortality rates of pregnant women and children under one year of age in the Tambacounda Region by improving community based health care services, increasing community access to health information, and strengthening community linkages with the health care system. The THSP has five objectives:

1) Increase the access to, demand for, and use of quality maternal and child health services, including emergency care;
2) Improve case management of malaria for pregnant women and children under five at the community and health post levels;
3) Improve nutrition of pregnant women and newborns, including promoting vitamin A supplementation and the practice of exclusive breastfeeding;
4) Improve diarrhea recognition and management at community and household levels;

5) Improve the capacity of local partners to plan, implement, monitor and evaluate child survival interventions at the community and district levels, with an emphasis on capacity in maternal and newborn health, malaria, nutrition, and breastfeeding.

Key strategies to attain these objectives include:

1) Building capacity at the health posts and community levels by training 70 health personnel and 200 Traditional Birth Attendants (TBAs);
2) Assisting communities to establish functioning referral and transport systems in collaboration with the MOH and community health committees;
3) Educating and mobilizing communities by training 400 CHWs drawn from among the members of local women's groups;
4) Organizing pregnant women, care givers, and grandmothers into maternal care groups;
5) Designing and carrying out a social marketing campaign to increase access to and use of ITNs, ORS, safe birthing/hygiene kits, and iron pills.

Interventions: The primary interventions and levels of effort for the THSP are divided as follows: Maternal and Child Health – 50%; Nutrition/Exclusive Breastfeeding – 20%; Malaria – 20%; Diarrhea – 10%.

Operations Research: The THSP will carry out a number of operations research activities, including 1) the use of TBAs to decrease maternal mortality; 2) the use of women's groups to promote maternal and child health; 3) the active management of the third stage of labor; 4) involving grandmothers in mother and child health projects.

Local Partners: Local partners include the District Health Teams, especially the *Centre d'Education et de Recuperation Nutritionelle* (CERN), the National Federation of Women's Groups, and UNICEF. Each partner brings a different set of resources to the program and Africare will draw on those resources during implementation.

DIP Planning Team: During the DIP planning process, Africare spoke with Ramatoulaye Dioume at the USAID Mission office in Dakar. This document was written by Kendra Blackett-Dibinga (Health Program Manager, Africare/Washington), Jim Dean (Country Representative, Africare/Senegal), Gorgui Sene Diallo (Program Manager, Africare/Senegal) and Ousseynou Samb (Assistant Program Manager, Africare/Senegal.)

B. CSHGP Data Form:

Child Survival Grants Program Project Summary
DIP Submission: Apr-30-2004
Africare Senegal

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Project Information:

Project Description:	Africare will implement the Tambacounda Healthy Start Program (THSP) in the Tambacounda Region of Senegal. The program will benefit 45,556 women of reproductive age and 40,995 children under age five through a coordinated effort to 1) strengthen community-based health care services and information; 2) raise the quality of service delivery by developing life-saving skills and knowledge to manage complications during pregnancy, delivery, postpartum, and the first year of the child's life; 3) increase awareness of key health behaviors through capacity building of CHWs and health committee members; and 4) mobilize families to better prepare for and manage pregnancy, delivery and newborn and infant care. The period of implementation will be from October 1, 2003 to September 30, 2008.
Partners:	Women's Groups, UNICEF, Health Districts of Tambacounda and Koumpemtoum
Project Location:	Tambacounda Region, Senegal

Grant Funding Information:

USAID Funding (US $):	$1,499,998	**PVO match:(US $)**	$477,998

Target Beneficiaries:

Type	Number
0-59 month old children:	40,995
Women 15-49:	45,556

Beneficiary Residence:

Urban/Peri-Urban %	Rural %
25%	75%

General Strategies Planned:

Micro-enterprise
Social Marketing
Strengthen Decentralized Health System

M&E Assessment Strategies:

KPC Survey
Health Facility Assessment
Organizational Capacity Assessment with Local Partners
Participatory Rapid Appraisal
Participatory Learning in Action
Community-based Monitoring Techniques
Participatory Evaluation Techniques (for mid-term or final evaluation)

Behavior Change & Communication (BCC) Strategies:

Social Marketing
Interpersonal Communication
Peer Communication
Support Groups

Capacity Building Targets Planned:

PVO	Non-Govt Partners	Other Private Sector	Govt	Community
US HQ (CS unit)	Local NGO Networked Group	Traditional Healers	Dist. Health Systems Health Facility Staff	Health Committees Other CBOs CHWs

Interventions:

Maternal & Newborn Care 50 %

** IMCI integration
** CHW training
** HF training
*** Emergency obstetric care
*** Neonatal tetanus
*** Recognition of danger signs
*** Newborn care
*** Postpartum care
*** Delay first pregnancy, child spacing
*** Integration with iron and folate
*** Normal delivery care
*** Birth plans
*** STI treatment with antenatal visit
Malaria 20 %
** IMCI integration
** CHW training
** HF training
*** Training in malaria case management
*** Antenatal prevention treatment
*** ITN (Bed Nets)
*** Care seeking, recognition, compliance
Nutrition/Micronutrients/Vitamin A (Combined) 20 %
** IMCI integration
** CHW training
** HF training
*** MinPack
*** Complementary feeding from 6 months
*** Continued breastfeeding up to 24 months
*** Growth monitoring
*** Supplementation
*** Postpartum
*** Integrated with EPI
*** Iodized salt
*** Iron folate during pregnancy
Control of Diarrheal Diseases 10 %

** IMCI integration
** CHW training
*** Water/sanitation
*** Hand washing
*** ORS/home fluids
*** Feeding/breastfeeding
*** Care seeking
*** Case management/counseling

Indicator	Numerator	Denominator	Estimated percentage	Confidence line
Percentage of children age 0-23 months who are underweight (-2 SD from the median weight-for-age, according to the WHO/NCHS reference population)	48	297	16.0	± 0.06
Percentage of children age 0-23 months who were born at least 24 months after the previous surviving child	80	122	66.0	± 0.08
Percentage of children age 0-23 months whose births were attended by skilled health personnel	139	303	45.9	± 0.08
Percentage of mothers of children age 0-23 months who received at least two tetanus toxoid injections before the birth of their youngest child	78	108	72.2	± 0.08
Percentage of infants age 0-5 months who were exclusively breastfed in the last 24 hours	19	80	23.8	± 0.08
Percentage of infants age 6-9 months receiving breast milk and complementary foods	13	39	33.3	± 0.1
Percentage of children age 12-23 months who are fully vaccinated (against the five vaccine-preventable diseases) before the first birthday	69	144	47.9	± 0.1
Percentage of children age 12-23 months who received a measles vaccine	82	167	49.1	± 0.1
Percentage of children age 0-23 months who slept under an insecticide-treated bed net the previous night (in malaria-risk areas only)	64	302	21.2	± 0.06
Percentage of mothers who know at least two signs of childhood illness that indicate the need for treatment	132	304	43.4	± 0.08
Percentage of sick children age 0-23 months who received increased fluids and continued feeding during an illness in the past two weeks	42	130	33.0	± 0.1
Percentage of mothers of children age 0-23 months who cite at least two known ways of reducing the risk of HIV infection	87	202	43.1	± 0.09
Percentage of mothers of children age 0-23 months who wash their hands with soap/ash before food preparation, before feeding children, after defecation, and after attending to a child who has defecated	16	220	7.3	± 0.04

C. DIP Preparation Process:

Africare's DIP planning team held several meetings with the Ministry of Health (MOH) and health agents from the Tambacounda Health District—including the District Medical Officer (*Médécin Chef de District*). The team also met with the Red Cross, UNICEF, the local non-governmental organization GADEC (*Groupe d'Action pour le Développement),* various womens' groups (*Groupements de Promotion Féminine)*, the Peace Corps, the Senegalese Civic Volunteer Service (*Service Civique National*) and local government authorities. All of these partner organizations are present in what was then the Tambacounda Health District (now Tambacounda and Koumpemtoum Health Districts).

These preliminary meetings allowed the team to analyze and discuss each partner's potential role in the THSP and to enlist the collaboration of the District Health Services. Partner roles were further developed during the DIP planning workshop held in the beginning of April 2004. The purpose of this workshop was to refine the program's essential strategies and interventions. Using Advanced Participation Methods (APM), the team presented the results of the Knowledge Practices and Coverage (KPC) survey and the Health Facility Assessment (HFA) to program beneficiaries, local implementing partners, and other stakeholders.

The workshop allowed the District Health Staff, local NGOs, and community representatives to (1) identify the key health problems in the region as reported by the KPC and the HFA, (2) identify and describe major contributing factors to those health problems, and (3) propose activities that would address those factors. The participants agreed that the THSP would continue to develop interventions in the areas listed in the original proposal: maternal and neonatal health, malaria, and malnutrition. The workshop resulted in defining the activities discussed below.

After the DIP planning workshop, the Country Representative, the Program Manager, and the Health Program Manager from Africare headquarters held a series of meetings with key national partners. The organizations they met included the *Programme de Développement Integré de la Santé* (PDIS) at the MOH, the World Health Organization (WHO), BASICS, UNICEF, and the USAID financed Maternal Health/Family Planning project implemented by Management Sciences for Health (MSH). The purpose of these meetings was to find synergies and establish vectors of collaboration. BASICS and the WHO have developed manuals for some of the primary interventions targeted by the THSP. Africare will use these materials in the program's training activities. UNICEF is improving access to clean water and training TBAs in the Tambacounda area and will be a key program partner.

Africare Senegal has recruited the following program staff members: (1) an expatriate program coordinator; (2) a maternal health advisor; (3) an IEC/BCC specialist; and (4) three program supervisors. These staff members are based in Tambacounda. Job descriptions and resumes of key staff members are found in the annexes. Africare Senegal has provided space for the THSP team at its main office in Tambacounda, to allow for synergies between the THSP and Africare's other nutrition, micro-credit, and health programs in the area.

D. Revisions from Original Application:

Change in level of effort for main interventions: The results of the KPC revealed that diarrhea was the number one cause of childhood illness. The THSP will thus place more of an emphasis on diarrhea through the program's nutrition intervention. Nutrition will now be at 20% level of effort and control of diarrheal diseases at 10% level of effort.

There has recently been a change in national policy as it relates to the first line treatment of malaria (from chloroquine to ACT.) At present, (and until the MOH works out a community level policy regarding its switch to dual therapy) the program is no longer able to conduct community-based distribution of anti-malarial drugs. This has led to a decrease in the level of effort from 30% to 20% since CHWs will be limited to information/prevention and referral activities.

Budgetary changes: Since the submission of the original program budget, Africare has been compelled to revise the program's costs to account for a drastic decrease in the exchange rate. At the time the proposal was written, one dollar was worth 700 CFA. At present, the dollar hovers at a rate between 500 and 550 CFA. Rather than increase the budget, Africare has realigned cost centers (decreasing some line items while increasing others) to meet the increased costs while remaining within the overall limit of available funds. A revised budget and budget narrative are included in Annex 1.

E. Detailed Implementation Plan:

1. Summary of Baseline and Other Assessments

Africare conducted a KPC, an HFA, and an Assessment of Community Based Organizations (CBOs) to help the design team refine its analysis of the priority health problems in the district. These results of these surveys allowed Africare and its implementing partners to hone the program's strategies to decrease maternal and child mortality and morbidity. In developing the questionnaire, the evaluation team used a modified version of the KPC 2000, which was validated through a pre-test. The WHO/EPI 30 cluster sampling technique was used to interview a representative sample of 309 women between the ages of 14 and 52 with children between the ages of 0-23 months in the health district of Tambacounda. In all, 23 localities were sampled. The results of these surveys and qualitative assessments have been used to write the following DIP and are summarized below by intervention.

The HFA was conducted in the health district of Tambacounda with the assistance of the district health team led by the District Medical Officer. After validating the questionnaire with the district team, the program sampled 31 health facilities: 26 public, and 5 private (including 1 faith based facility.) Both interview and direct observation techniques were used to assess the health facilities. In addition, a second phase of interviews using focus groups was held with traditional healers.

The program assessed a sample of nineteen CBOs from among the 160 CBOs that are presently operating in the district. The sampling method was based on the distribution of CBOs throughout the district (four in each of the four *arrondissements* and three in the *commune* of Tambacounda). The program used a structured questionnaire that included four components: 1) organizational structure, 2) management, 3) financial management, and 4) outreach activities. The questionnaire also addressed solidarity practices among members.

Summary of Baseline Results: The baseline survey conducted for the THSP confirms that the health situation in Tambacounda is worse than the national average on all indicators. Selected indicators are summarized below**.**

General Findings: The majority of the women interviewed had attended Koranic school (29%). Twenty-three percent attended primary school and 22% had no education. The majority of women worked as vendors (47%), and farmers (16%), while only 6% had a

salaried form of employment. Mothers were the primary caretakers of 39% of children, while 25% were cared for by grandmothers and 13% by older children.

Maternal and Neonatal care: As previously stated, the maternal mortality rate of 770/100,000 live births in the Tambacounda district is higher than the national average of 510/100,000 live births. The number of births assisted by trained personnel (45%) in the district is also lower than the national average of 59.5%. The Vitamin A coverage forty-two days after giving birth (11%) is much lower than the national average (31%.)

Such socio-cultural factors as (1) female genital mutilation, (2) the low status of women, (3) the low educational levels of women, (4) the tendency to seek care from traditional healers and untrained TBAs, all contribute to increased risk during pregnancy and childbirth. The large geographic area of the district and the inadequate number of health facilities are also a major problem. Long distances to health posts, the limited financial means of the population and an inadequate referral system all lead to serious delays in seeking care.

On the national scale, the mortality rate of newborns has not yet been effectively assessed. However, meetings with the MOH reveal that 50% of the cases of child deaths occur during the period immediately following birth (0-28 days).

KPC data show that:

- 85% of women reported having benefited from at least one prenatal care visit (as compared to a national average of 81%), however only 33% reported having made the three visits as prescribed by the MOH policy;
- 50% of all women interviewed delivered at home, 16% in health posts, 19% in health centers and 11% in hospitals;
- 45% of women interviewed had delivered in the presence of a doctor, midwife or nurse. However, 48% of women interviewed delivered in the presence of someone other than a skilled health provider;
- The majority of the women interviewed had not received an exam after giving birth (58%); 74% of those that had were given that exam by a midwife.

Malaria: Malaria is endemic in the Tambacounda Region. It is often cited as the number one cause of child morbidity and mortality. Most cases are caused by *P. falciparum* and 25% of cases are resistant to chloroquine. No coverage data on ITNs in the program area exist. The WHO reported that Senegal had less than 20% total coverage in ITNs of which less than 5% were treated with insecticide (MICS-II-2000, DHS 1998-2001). The data from the KPC reveal that although the number of households with ITNs (51%) is higher than the national average, the use of those nets seems to be restricted to the head of household.

The MOH has begun to implement its new IPT policy, using fansidar that is provided exclusively by the district health services. Community level prophylaxis is no longer accepted politically. The MOH is also changing its policy regarding the administration of chloroquine for treatment, emphasizing various combination therapies instead (with a preference for amodiaquine plus fansidar, as the most accessible combination.) Under these new policies, community-level response to malaria is essentially limited to the recognition of danger signs and the prompt seeking of appropriate care.

KPC data show that:

- 78% of women reported having taken an antimalarial during pregnancy (of which 2% took fansidar);
- 72% of mothers know the cause of malaria;
- 60% of mothers interviewed were able to cite a method of prevention;
- 48% sought care for their children who presented with a fever;
- 51% reported having an ITN in their house;
- 18% of mothers interviewed reported having slept under a mosquito net.

Nutrition/Exclusive Breastfeeding: According to UNICEF's Multiple Indicator Cluster Survey (MICS-II-2000), 18.4% of Senegalese children under five have low weight for height. In addition, only 23.4% of infants in Senegal are exclusively breastfed for the first 4 months. Religious practices include a tradition of administering "holy water" as a first food, which partially accounts for the high percentage of foods other than breast milk (68%) given after birth in the district. The negative influence of grandmothers concerning exclusive breastfeeding was also cited as a reason for the early introduction of other foods. The KPC revealed that:

- 13% of infants 0-23 months show signs of emaciation (as compared to 8% of under fives nationally);
- 20% of infants 0-23 months are either severely or moderately malnourished;
- 22% of infants 0-23 have low weight for height;
- 49% of mothers reported having iodized salt present in their homes;
- 40% of mothers reported that their child had received Vitamin A supplementation.

Diarrhea Case Management: Nation-wide, the 1999 DHS revealed that 21.43% of children under five had suffered an episode of diarrhea in the two weeks preceding the survey. During the KPC, mothers cited diarrhea as the most frequent illness in their children (45%). This is likely due to lack of access to safe water sources (less than 50% in rural areas). However, only 48% were able to cite at least one case of diarrhea. The KPC revealed that only 52% of the children who had diarrhea had ever used ORS/ORT. This is likely due to a lack of knowledge concerning the causes and treatment of diarrhea. Key practices such as the maintenance of the level of breastfeeding or increased levels of breastfeeding during illness were followed in 71% of the cases. Further, only 31% of mothers sought advice or treatment when their child had diarrhea.

Acute Respiratory Infections: Respiratory infections are a major cause of illness and death of children in Tambacounda and throughout Senegal. In the Tambacounda Region, the MICS-II-2000 reported a pneumonia prevalence of 6% for children under 5 during the previous two weeks, in line with the national average of 6.6%. The KPC data show that 43% of children had presented signs of ARI such as coughing, breathing difficulties and/or wheezing in the previous two weeks. While 48% of mothers eventually sought care for their children who had an ARI, only 32% sought care the same day they noticed the signs.

Immunization: Immunization coverage is low. The KPC showed that 49% of children in the region have received the three doses of the polio vaccination by their first birthday, the same as the national average (MICS-II-2000). The KPC also showed that 49% of children had received measles vaccination (the same as the national average) and 49% had completed the dosage for DPT (DPT 3), slightly lower than the national average of 51.8%. Logistical difficulties in the region have inhibited wider vaccination coverage.

Contraceptive Use: Use of modern contraception in Senegal is extremely low at 10.5% (MICS-II-2000), although knowledge of modern methods is relatively high at (DHS 1999).

Health post providers have been trained in contraceptive technology. Pills, condoms and Depo Provera are available at health posts and health workers track women for family planning. Women tend to prefer injectables. The Pular and Mandingue traditionally value large families and women tend to have high fertility into their forties. The KPC showed that 79% of the women surveyed in the district did not use any type of contraceptive and less than 3% used any modern form of contraception.

HIV/AIDS: At 1.8%, the sero-prevalence rate for HIV/AIDS in Senegal is low in comparison with other West African countries (UNAIDS 1997). HIV/AIDS continues to be a priority for the MOH, which promotes safe sex and assures the availability of condoms *(Programme National de Santé de la Reproduction* 1997-2001). The KPC revealed that only 54% of mothers interviewed knew that HIV could be transmitted from mother to child.

Sources of Health Information:

- Mothers interviewed reported having spoken of health matters with a health professional in 15% of the cases, a traditional healer in 10% of the cases, and a relative or friend in 8% of cases;
- 48% reported having received health information through radio communication and 24% by television messages; 4% reported receiving information from newspapers.

Health Facility Assessment

Quality of Existing Health Services: The quality of health services in the Tambacounda district was relatively low for most indicators.

- In the thirty days preceding the survey, 17/31 health facilities had an essential drug stock out (Vitamin A, fansidar, ORS, chloroquine).
- 63% of the health staff interviewed had been trained; of those the majority was either nurses or midwives. Auxiliary personnel were not often the beneficiaries of supplemental training;
- The majority of the posts had not been supervised in more than 2 months;
- Only 20/31 of the health facilities participated in advanced strategies;
- 13/31 health facilities did not have waiting rooms for patients.

CBO Assessment

Institutional Structure: The leaders of all 19 CBOs surveyed were democratically elected, following rules that guarantee equality and transparency. Only 53% of them have received official recognition from the Government of Senegal (GOS)—a requirement if a CBO wants to undertake programs with donor funding.

Functioning:

- 74% of all the boards meet regularly and information is shared with the members (89%). However, 53% of the CBOs do not have any record of their meetings' minutes.

Financial Management:

- Most of the CBOs surveyed possess a bank account (89%) and a financial journal (79%). However, improving financial procedures remains a big challenge.
- In approximately 60% of the cases, the financial records were either not updated or non-existent. In addition, most of the members do not understand these financial procedures.

Coverage: The Health District of Tambacounda has a population of 302,068 people in an area of 20,328 square kilometers. Tambacounda is composed of one *commune* (Tambacounda), four arrondisements (Koussanar, Koupentoum, Maka and Missirah), and 12 *communautés rurales* (CRs). Since the creation of the new district, the Tambacounda Health District now comprises the arronissements of Missirah and Koussanar, while the Koumpemtoum Health District comprises Maka and Koumpemtoun arrondissements. Tambacounda's population is 83% rural and 17% urban. The majority of the population is involved in agricultural activities. The region is extremely poor; approximately 40% of the population lives below the poverty line. Approximately 72% of the population is illiterate.

Seventy percent of the population lives more than 5 kilometers from a health center/post and 30% live more than 15 kilometers away. The human resources of the health districts are also insufficient, with only one doctor per 133,771 people, 1 nurse for 7,869 people, and one midwife for every 15,384 women of reproductive age. There are 104 health huts in the districts, but only a minority actually functions. As a result, coverage indicators are among the lowest in the country.

Disease Surveillance: The health system carries out surveillance for key diseases including yellow fever, cholera, and polio. Cases of meningitis are also tracked. Currently, there is no system in place that would allow for integration of the Community-based Health Information System (CHIS) with the Health Districts' HIS. Discussions with the MOH reveal a critical need to improve essential data collection on maternal and child health in the region. Basic information concerning up to 50% of the mortality cases never reaches the formal health system.

MOH Policies, Strategies, Case Management Policies, Current Services:

Nutrition Surveillance: BASICS II has been instrumental in assisting the MOH to devise an integrated strategy to improve the nutritional status of the population, the *Paquet d'Activités Integrées de la Nutrition* (PAIN). This integrated package tackles community nutrition problems at three different levels, using geographic targeting with emphasis on the community; biological targeting with emphasis on vulnerable groups; and biological targeting with emphasis on malnourished individuals. It allows program implementers to design programs that target key nutrition behaviors depending on the age of the individual, linking exclusive breastfeeding and the consumption of Vitamin A rich foods, for example. There is a nutritional center in Tambacounda that focuses on the rehabilitation of malnourished children. The program will work with the center and the district health services to better manage nutritional deficiencies at the community level, providing supplementation and nutrition education. Severe sub clinical vitamin A deficiency has been found to be widespread in various parts of Senegal (World Health Organization, 1995). The KPC revealed that only 10% of children had received vitamin A supplementation. Current government policy is to distribute vitamin A during the annual National Immunization Days. The THSP will also target pregnant women for iron supplementation. The current MOH policy is to provide iron supplements to pregnant women for the duration of pregnancy.

Malaria Control: Africare met with Dr. Bacary Sambou at the World Health Organization (WHO) to discuss the training plan for health agents on C-IMCI. The WHO has recently published an integrated training manual for use in training district health staff in the management of childhood illnesses, including malaria. The GOS does have a Roll Back Malaria strategy in place (2001-2005) and has produced a manual for monitoring specific indicators. Africare has used these manuals to align the program's indicators with the

national policies and strategies. The use of Intermittent Presumptive Therapy (IPT) for pregnant women using sulfadoxine/pirimethamine (fansidar) has not yet been adopted in the health district of Tambacounda (only 2% had received IPT).

C-IMCI: The MOH has adopted IMCI as a key strategy to combat the major causes of death for children under age five. The WHO has already trained district health staff in clinical IMCI. The THSP will use the community IMCI (C-IMCI) approach for the malaria and nutrition interventions since it replicates the government's strategy. C-IMCI's emphasis on increasing access to care through community-based providers, improving partnerships between the health facilities and communities, and the 16 key behaviors, will have an effect on the maternal and neonatal care. The THSP will stress the need for early recognition of danger signs, the importance of seeking prenatal care, and the importance of referral in obstetric emergencies.

Community-Based Distribution: The GOS allows community-based distribution of certain items including condoms, insecticide treated mosquito nets (ITNs), ORS/ORT, iron supplements, and Vitamin A. The GOS promotes the use of ORS/ORT packets in preference to training women in home-based preparations. Community-based distribution will be a key element of the THSP. The CHWs will work with the health committees to develop management plans for the items that are sold at the community level.

2. Program Description By Objectives, Intervention and Activities

Overall Program Approach: The THSP will use the C-IMCI framework to achieve program results. Strategies include: 1) changing community behavior relating to the four main interventions; 2) organizing women into maternal care groups to reinforce positive care seeking and preventive behaviors; 3) community based distribution; and 4) capacity building. Africare will also create synergies between ongoing efforts in the Tambacounda and Koumpemtoum Health Districts to attain program objectives.

Behavior Change Communication: The THSP will provide individual and group education, using targeted messages that emphasize key practices/behaviors in support of maternal and infant health and development. Community-based identification for behavior change communication (BCC) and analysis of internal and external determinants affecting health outcomes will guide the design of target messages and activities, using the BEHAVE framework. The program will integrate a variety of communications channels, both modern and traditional, to promote key family behaviors. The program will make use of local theatrical troupes to perform skits on maternal and child health in the communities. Because of their ability to mobilize large numbers of people at once, including men, women and children, these presentations will be able to reach a large segment of the population. Other IEC and BCC activities include peer education within the maternal care groups and CHW activities such as home visits. Women group leaders will conduct community demonstrations to promote improved nutrition for pregnant women and children under five. Applying the positive deviance model, this approach will call on "model mothers" to conduct nutrition demonstrations. The program will give preference to model mothers in its choice of CHWs, thus increasing the potential for information flow. The BCC campaign will allow communities to confront their health issues as actors (in the case of cooking/food processing demonstrations) and participants (in the case of community forums, theatre, and group discussions for participatory problem solving).

Maternal Care Groups: The strategy for maternal and newborn care relies on "care groups" consisting of pregnant women, women who would like to have children in the future, and grandmothers. These community groups will serve as a self-reinforcing mechanism to help women understand the importance of prenatal care, learn the danger signs, and establish a functioning emergency transportation system through membership donations. The groups will also reinforce key behaviors such as sleeping under a mosquito net during delivery and using birthing/hygiene kits for safe and clean deliveries. Mothers will learn the importance of exclusive breastfeeding and the proper feeding for children according to age as well as recognition of the signs and proper management of diarrhea.

The THSP will work with the women's groups to mobilize communities to find solutions to maternal and child mortality and morbidity due to obstetric emergencies, malaria, and malnutrition. These include devising a functional referral and transport system from the village to the health post or health center. Contributions to a general fund within the women's groups will facilitate this activity. The program will also integrate community-based distribution of essential medications. CHWs will be trained in all the interventions of the program, according to accepted protocols, and will be provided with an initial stock of products for sale at the community level. Part of the profits will be used to help develop referral and transport systems while another part will be developed to help mothers access the care they need during pregnancy.

Community-Based Distribution: CHWs will be given an initial stock of items for distribution, including iron folate, ITNs, insecticide, vitamin A, and ORS/T. Items in the health workers' kits will be sold on a revolving fund basis under the supervision of local management committee. The CHWs will be required to keep records of sales and to report on sales on a monthly basis.

Capacity Building: The THSP will train or recycle approximately 600 CHWs (400 recruited for the THSP and 200 from a pool of existing CHWs), 70 health facility workers and 200 TBAs. Through this training, the program will 1) increase the access, use, and quality of maternal and neonatal health services at both the community and the health post levels, 2) increase the nutritional status of pregnant women and children under five and 3) decrease the incidence of malaria through the use of ITNs and promotion of intermittent presumptive therapy (IPT). CHWs will be trained in each of the interventions and will be responsible for educating community members and pregnant women on key practices relating to maternal and child health. Such high numbers are necessary in order to effectively cover the intervention communities due to the difficulties described previously.

The THSP will train TBAs using the Saving Life Skills module so that they may better manage obstetric emergencies at the community level and refer those cases that cannot be managed in the community. TBAs will also be targeted for training in: 1) counseling and education during pregnancy, especially maternal nutrition, preventing malaria, avoiding anemia, the importance of pre-natal consultations, and recognizing danger signs; 2) assisting labor during simple births and providing immediate referral in the case of complications; 3) monitoring postpartum mothers and newborns. The program will train the TBAs in the following aspects of neonatal health: 1) neonatal care; 2) immediate postpartum care; 3) counseling for exclusive breastfeeding beginning immediately after birth; 4) ensuring vitamin A supplementation in the 42 days following birth; 5) providing advice on newborn vaccination; 6) recognizing danger signs in newborns and postpartum women. Africare will choose TBAs who are literate in French or in local languages. Africare has already acquired

considerable experience in integrating TBAs in its community health programs. The TBAs are an integral part of the health services structure in Senegal.

The program will use the COPE methodology to train Health Facility staff to provide client-oriented services. The three groups (CHWs, TBAs and Health Facility staff) will form the core health team at the community level and will work in collaboration to ensure increased access and improved quality of care.

Implementation Strategy: The THSP will be implemented in 400 villages in the Tambacounda and Koumpemtoum Health Districts. The program will choose its target villages according to the following criteria: 1) the density of the population; 2) the proximity to health huts; 3) the existence of literate TBAs (in French or local languages); 4) the existence of organized women's groups. Each village will have at least one CHW responsible for making sure that health messages and activities reach the individuals in his/her community. They will assist the more trained health workers (trained TBAs) with the identification of pregnant women and un-immunized children, provide health education, and distribute essential drugs and supplies. Many CHWs will be model mothers chosen from within the women's groups and the group management committee will provide them with additional support. Each CHW will cover villages within a 5-7 kilometer radius of his/her home, an average population of 600 women and children under five per coverage area. Each CHW will have access to credit on favorable terms both for financing health activities and for their own personal business as an economic incentive to work.

By ensuring that the women's group in each village chooses their CHW, the program will be able to better serve women's needs. Focus groups in the region have revealed that women generally do not want to see a male doctor for their care, or speak to men on matters regarding childbirth. This is a major barrier to seeking care at health centers or hospitals. Because issues concerning pregnancy and childbirth are quite intimate, it is important that women be able to speak to their peers about care seeking practices during pregnancy. Furthermore, women are more stable in the communities than men (who tend to migrate seasonally in search of work). Choosing women as CHWs thus seems the more feasible alternative.

The program will use a phased implementation approach. All 400 CHWs will be selected and trained between years 1 and 2 of the program. CHWs will be trained in communication techniques for each of the intervention areas as they are selected. A similar approach will be used for training TBAs.

Africare Senegal will integrate many of its programs in Tambacounda to attain program objectives. Currently, there are two nutrition projects: the Maka Community Health Project and the *Projet d'Appui et de Renforcements des Interventions en Nutrition et Santé* (PARINS).

Objectives, Interventions and Activities: The overall goal of the THSP is to contribute to a reduction in morbidity and mortality rates of pregnant women and newborns due to obstetric emergencies, malaria and malnutrition. The THSP has five objectives:

- Increase access to, demand for, and use of quality maternal and child health services, including emergency care;
- Improve case management of malaria for pregnant women and children under five at the community and health post levels;

- Improve nutrition of pregnant women and newborns, including iron folate/vitamin A supplementation and exclusive breastfeeding;Improve diarrhea recognition and management at community and household levels;
- Improve the capacity of local partners to plan, implement, monitor and evaluate child survival interventions at the community and district levels, with and emphasis on capacity in maternal and newborn health, malaria, nutrition, and breastfeeding.

The program will intervene in four domains: maternal and neonatal care, malaria and nutrition/exclusive breastfeeding, and diarrhea. The THSP targets four *arrondissements* and the commune of Tambacounda, for a total population of 227,766 persons, of which 40,995 are children under five years of age and 45,556 are women of reproductive age (WRA).

TAMBACOUNDA DISTRICT BASIC HEALTH FACILITY AND POPULATION DATA							
Health Post Site	**Distance to Health Post**	**Current Health Resources**	**Villages covered/ # of TBAs needed**	**Total Pop. (2001)**	**WRA (~20%) 43% of females**	**Ch<5 years (~18%)**	**Ch 0-11 Mo. (~5%)**
Bamba Thialene	140	1 N; 3 T; R11	33; N=16	16649	3330	2997	833
Bira	70	1 N; 4 T; R17	17; N=9	7703	1540	1385	385
Bohe Baledji	75	1 N; 3 T; R16	16; N=8	3610	722	650	180
Dialakoto	70	1 N; 5 T; R9	27; N=14	9958	1992	1792	498
Kahene	130	1 N; 3 T; R7	22; N=11	7898	1580	1421	395
Koumpentoum	100	1 N; 5 T; R8	25; N=12	14378	2876	2588	719
Koussanar	50	1 N; 4 T; R10	31; N=15	15979	3196	2876	799
Kouthiaba	130	1 N; 4 T; R11	33; N=16	18748	3750	3375	937
Maka	80	1 N; 5 T; R7	21; N=11	13202	2640	2376	660
Maleme Niani	70	1 N; 3 T; R9	26; N=13	12871	2575	2317	644
Mereto	130	1 N; 3 T; R9	28; N=14	16824	3365	3028	841
Missira	35	1 N; 6 T; R9	27; N=14	12835	2567	2310	642
Neteboulou	27	1 N; 4 T; R5	14; N=7	5428	1086	977	272
Payar	160	1 N; 4 T; R11	34; N=5	13865	2773	2496	693
Sare Diame	110	1 N; 2 T; R11	32; N=16	8833	1767	1590	442
Sinthiou Maleme	27	1 N; 2 T; R5	14; N=7	8985	1797	1617	450
Tambacounda (PMI)	(1)	2 N; 2 D; 3 SF; 24 relays 7 T; 3 A	1 (town) N=5	~40,000	8000	7200	2000
T=TBA (already basic trained), N=Nurse, A=IEC Animator, D=Doctor, R=Relay (VHW), SF=Sage Femme/Midwife							
TOTAL	**16 + (1)**	**N= ~20 Nurses**	**400/193**	**227,766**	**45,556**	**40,995**	**11,390**

Maternal and Child Health (50%)

Approach: The THSP aims to 1) increase the demand for maternal and newborn care services, 2) increase the adoption of healthy behaviors during pregnancy, birth and postpartum, and 3) improve the quality of maternal and newborn care at the community and health post levels. The program will have a two-pronged approach to improving maternal and newborn health and survival. The first is to educate, motivate and mobilize individuals, households, and communities to adopt healthy behaviors and care seeking practices (discussed under proposed IEC/BCC activities). The second is to strengthen the capacity of the health care system to improve quality of and access to essential care, bringing them closer to women and families. Tambacounda is a setting with low access to facilities due to distances and poor roads, predominately family-attended or self-attended home births, no clearly defined mechanism for early postpartum care, and limits in the current capability to provide services at all levels. This setting requires a realistic approach that prioritizes strengthening capacity at all levels to provide basic, routine care to all pregnant women, new

mothers and newborns. Emphasis is on birth preparedness for all women, promoting clean birth practices, clean birth kits, good conduct of normal deliveries, and timely routine care for all mothers and newborns. For those women and newborns who do develop complications, the focus is on strengthening community capacity to recognize obstetric emergencies, stabilize and refer, bringing life-saving care as close to families as possible. At the same time, community transportation plans linking improved community services with higher levels of emergency care and an increased readiness at the health post facility are developed. These strategies address the challenges and constraints presented in remote rural areas with low access to quality care.

Identification of Pregnant Women/Formation of Maternal Care Groups: Part of the role of the trained TBAs and CHWs is to assist the program in identifying pregnant women. Once identified, the THSP will work with communities and women's groups to form maternal care groups. These maternal care groups will focus on pregnant women but include mothers, women wanting to become mothers, and grandmothers. Each group will be composed of no more than ten individuals. The purpose is to support the mother throughout the pregnancy, reinforce key practices such as prenatal care and exclusive breastfeeding, and emphasize the importance of iron supplementation. It is anticipated that throughout the life of the THSP, approximately 600 maternal care groups will be formed (based on current fertility rates and number of women of reproductive age). These groups will be organized throughout the program communities. The THSP will work with the maternal care groups to establish regular contributions to help the pregnant women care for their health needs, including the purchase of a hygiene kit, or transportation to a health facility if the need arises. Pregnant women will also be able to purchase ITNs from these funds. The program's strategy of utilizing the women's groups will help it attain the goal of reaching the greatest number of women of reproductive age. Because existing women's groups in the region are highly organized and call upon a great number of women in the villages where they operate, the program is confident in being able to identify target women.

Increasing Access to Essential Care: According to the MOH, the major causes of maternal mortality are hemorrhage (29%), hypertension/eclampsia (16%), infection/sepsis (7%), uterine rupture (5.2%), obstructed labor (8%), illegal abortion (3%), and other causes. Access to clean and safe delivery by skilled providers can help in decreasing maternal mortality. However, lack of access to health care at the community level, lack of an effective referral and transport system and difficult terrain in the Tambacounda Region have greatly contributed to the high maternal mortality ratio discussed above. UNICEF's model of the four delays indicates that approximately 75% of maternal deaths could be prevented through training TBAs in obstetric and emergency management, use of antenatal care, child spacing/family planning and transportation to the health center.

The KPC survey revealed that 85% of the women received prenatal care. However, only 33% had made the minimum three visits. In addition, many of the women interviewed did not give birth in a health center or hospital. Data from the KPC indicate that 50% of mothers gave birth in the home, while only 19% gave birth in a health center, and 11% in a hospital. Furthermore, 27% of those who gave birth in the home only had the assistance of a family member.

The program will train 200 TBAs using the life-saving skills module. This training will emphasize management of childbirth at the community level, including obstetric

emergencies. The THSP will stress care for neonates: mothers will be educated on proper care of newborns and recognition of danger signs that need to be referred.

TBAs will be responsible for attending births, keeping a pregnancy/birth register, promoting immediate and exclusive breastfeeding, providing counseling on family planning (FP) to mothers, referring mothers to ANC and to health facilities in the case of obstetric emergencies, and postpartum follow-up.

The program will train 70 health care providers in managing newborns, pre- and post-natal care, and on the new protocols for managing malaria in pregnant women. The program will also train 30 auxiliary health agents who currently work in the health posts and are paid staff on counseling techniques for family planning

Clean and Safe Delivery: The program will support safe birthing practices. In the Tambacounda Region, Africare has already constructed and equipped six health huts (with funding from the Japanese government) where women are provided with clean and safe deliveries. Another nine health huts have been constructed and equipped under a project implemented by Engender Health. As mentioned previously, of the 104 health huts in the program area, only these 15 are functional and well equipped. The 89 others either lack a management committee, or a trained TBA, or equipment, or all of the above. The program will target these dysfunctional health huts during implementation. Since these huts are owned and operated by the community and function on the basis of community investment, the program will work with the management committees to revitalize community participation. Members of the management committee will be trained in the proper management of financial and human resources, and entrepreneurship to raise money for the continued functioning of the health huts. These renovated huts will be used for clean and safe deliveries and regular check-ups of pregnant women. They will assist the program to bring health care closer to the communities.

UNICEF, UNFPA and the GOS are presently training TBAs to support safe and clean deliveries. Africare will complement this training by refreshing 200 TBAs in the Life Saving Skills module for the management of obstetric emergencies at the community level. The THSP will procure safe birthing kits for program TBAs and will distribute the kits after the completion of training. These kits will include sanitary napkins, soap, and gloves among other key items. To further support clean and safe deliveries, the program will work through the mechanism of the care groups. Members will contribute on a monthly basis for the purchase of hygiene kits for pregnant women. These mothers will be counselled on the importance of having their kits available when they are ready to give birth.

The organization of the care groups will facilitate birth preparedness and emergency preparation through the monthly contributions of its members to purchase hygiene kits, refer the mother in the case of emergency, and assist in developing a functional emergency transport system.

Malaria and Pregnancy: While 20% of program efforts will be committed to malaria, a major program focus will be malaria prophylaxis for women during pregnancy. The program will train 70 health care providers at the health posts on the new treatment protocols using sulfadoxine pirimethamine (fansidar) for preventive treatment of pregnant women. In order to provide a comprehensive antenatal care package, the program will place emphasis on adherence to the new protocol. The THSP will also promote ITNs in the health

centers/maternity wards for mothers who come in for prenatal visits. ITNs will also be promoted in the community through the care groups. Women will also be able to purchase these nets through a revolving mechanism based on their regular contributions. Forty women's groups will be identified as sale points for the purchase of ITNs. In addition, 120 CHWs will be trained in retreatment techniques for the ITNs. This will enable the activity to be more profitable at the community level. The program will train 120 CHWs in re-treatment techniques. Because CHWs are not allowed to distribute medication for malaria, the program will work with them to better recognize the signs and refer clients for appropriate treatment.

Intervention Specific Approach: BCC, Access, Quality

Behavior Change Communication: IEC/BCC activities will emphasize community participation in the resolution of problems related to maternal and newborn morbidity and mortality. The KPC identified a number of behaviors such as low utilization of prenatal care and preference for a woman to assist at birth. IEC/BCC activities for maternal and child health will therefore use a number of communication channels to address both men and women. The care group will be the primary point of information sharing and learning for pregnant women. The CHW will play an important role within these groups. As a woman, she will be able to speak about the intimate subject of childbirth and will be able to help women adopt healthy behaviors that could eventually save her own life and the life of her newborn. The program will work with the decentralized structures of the women's groups to reach the maximum number of women possible.

The program will use the tools developed by BASICS on maternal and child health at the community level and will develop a packet of key behaviors that will be reinforced within the care group. These behaviors include exclusive breastfeeding for up to 6 months, developing a birthing plan including measures for emergency care, and preparing nutrient dense foods. The program will also make use of the Safe Motherhood package developed by UNICEF to train CHWs on the "Four Delays" which result in maternal mortality. These are addressed below:

DELAY #1: Delays in problem recognition due to traditional beliefs, low perceived risk, low knowledge of causes of death, danger signs and complications, ineffective screening. THSP will address this delay through the maternal care groups and working through the health facilities. Trained TBAs will also be implicated, as they will come to understand their limits and refer women when necessary.

DELAY #2: Delays in deciding to seek care due to women's low status/lack of participation in decision making, lack of birth planning/preparedness, high rates of unattended home births and untrained attendants, poor quality of health services. THSP will target this delay by working with grandmothers who heavily influence a woman's decision to seek care. Through the women's groups, mothers will also have additional community support to adopt healthy care seeking practices.

DELAY #3: Delays in reaching the health facility due to geographic distance, lack of resources to pay for services, inadequate communication and transportation systems, inadequate knowledge of where to seek care and how to get to a facility. THSP will explore effective means of transportation with the intervention communities and through a system of contribution both within the maternal care groups and in the communities themselves, mothers will have increased access to transportation in cases of emergency.

DELAY#4: Delays in receiving quality treatment at the health facility due to lack of medicine, supplies and equipment to treat complications, cumbersome administrative processes, lack of competent, motivated personnel, lack of adequate supervision and

management information systems, lack of outreach and follow-up mechanisms. Africare is implementing THSP in close collaboration with the district health services. There is strong commitment to ensure that these factors are addressed.

Key messages for expecting mothers and other program beneficiaries include:

- The importance of prenatal care
- Danger signs for pregnancy, delivery and postpartum periods
- The importance of immunization, iron supplementation, IPT and screening for complications
- The importance of hygienic and assisted deliveries using birthing kits
- The importance of birth planning and planning for emergencies
- The importance of immediate and exclusive breastfeeding for six months
- The importance of child spacing and the availability of family planning methods at the health post, with the TBA and/or CHW

The goal of the program's BCC activities is to engage soon-to-be mothers in practicing key behaviors for healthy deliveries including:

- Selection of an appropriate place for delivery;
- Recognition of danger signs in pregnancy by women and family members (bleeding, convulsions, pallor, labored breathing, headache, swollen hands or face, fever);
- Understanding where, when, and how to obtain referral care. Households need to plan for emergency transport to the health center or hospital in case of unexpected complications;
- Nutrition behaviors including increased intake of locally available and affordable foods; and immediate and exclusive breastfeeding after birth;
- Actions to prevent infectious diseases: hand washing; sleeping under ITNs; and use of condoms.

Health care providers will also be targeted with IEC/BCC messages. Key messages for health care providers include:

- The use of a safe birthing kit
- Adhering to the malaria case management protocols for pregnant women

Since male involvement is essential to improve maternal and neonatal care in this traditional context, men and health committee members will be targeted for health education and awareness. The program will use theater and other traditional means of communication to engage men in solving the problems related to maternal and child health. A local troupe called Bam Tare will be instrumental in the program's community mobilization activities. The program will target community leaders with messages on key practices such as prenatal care and malaria prophylaxis for pregnant mothers.

Trained TBAs will be knowledgeable of family planning methods and will be able to counsel new adopters on the variety of methods available. They will continue in their role as prescribers of family planning methods. This will help mothers better plan their future pregnancies.

Access: Increased access to care will be promoted through community mobilization activities designed to increase community commitment and support of the health huts, which are community owned and managed facilities. Africare is currently working with many health committees who are running health huts in the intervention communities. The goal is

to ensure that the community becomes more involved in the construction, management and upkeep of these huts to ensure that women have increased access to safe birthing spaces and clean deliveries.

Access is also increased with an increased number of trained TBAs. Africare is working in close collaboration with UNICEF. By training 200 TBAs, 400 new CHWs and a smaller number of already existing CHWs, the program is developing a cadre of trained health agents who will be able to recognize obstetric emergencies, teach mothers about the quality of foods and show them how to prepare nutrient dense meals for their families. By placing CHWs in even inaccessible areas, the program will have extensive reach, the program will build on existing knowledge and enable communities and households to adopt and practice key behaviors related to maternal and child health. Lastly, by integrating Africare's other program interventions, the program recognizes that purchasing power is key to adopting and sustaining the practice of key health behaviors.

Access to ITNs and safe birthing kits will be ensured through both the maternal care groups and the district health services. The program will work closely with the women's groups to create a social scheme that relies on a revolving credit system from which all mothers can benefit. Funds will be used to purchase safe birthing kits for mothers to be in addition to ITNs. All women in the maternal care group and the collective in general will contribute on a regular basis to be determined internally. Through this mechanism, women will be able to finance their safe birthing plans and ensure appropriate transportation to a health facility should the need arise. Additionally, in collaboration with the district health services, THSP will work to ensure that women have access to IPT during pregnancy.

Quality: The THSP is collaborating with partners, including BASICS and the WHO, to use tools that have already been tested in the country on maternal and child health. These tools will offer program implementers a solid foundation on which to base the training activities of the CHWs. The program is also working with a manual produced by the WHO to train the health providers in Tambacounda. Currently, the WHO is working on validating the module to be used to train community-based providers including TBAs and CHWs. This should be completed by July after which the MOH will make it available to the public for use.

Another important community level worker is the TBA. Some of these are already trained and work in the health huts throughout the health district. However, much needs to be done to increase their capacity to recognize obstetric emergencies and to refer in appropriate time. Health post midwives/nurses will help to train approximately 200 TBAs using the saving life skills module. Supervision of the TBAs will be important in assuring quality of this intervention. The nurse of the health posts will supervise the TBAs on a monthly basis during the advanced strategies for vaccination activities. Midwives will also play a key role in supervision. They will supervise the TBAs on a quarterly basis. The BCC and Maternal Health advisers and other program supervisors will also be involved in the supervision activities. They will make monthly visits in order to keep the community-based HIS current. TBAs will be required to collect various data on pregnant women and nutrition activities, and will record the relevant information in a notebook. This will be shared with the supervisor at these meetings.

Nutrition/Micronutrients/Exclusive Breastfeeding (20%)

Approach: Child survival interventions such as nutrition, control of diarrhea, breastfeeding and weaning, use of oral re-hydration salts, promotion of vitamin A and other important

minerals and micronutrients, are all very inter-related, and overlap in many ways. For Africare, an organization with 30 years experience in African food security/nutrition initiatives, nutrition and breastfeeding (including micronutrients/supplementation) are not segmented, but brought together with related interventions. Maternal nutrition is addressed along with child nutrition, and the importance of vitamin A and iron for women is taken on equally with vitamin A for children, along with iodine and other important elements. Because of the relationship between diarrhea and malnutrition, THSP will integrate this topic in training of CHWs. Food quality and quantity, food preparation and family eating practices are linked with quality drinking water, good hygienic practices with food, and other aspects of daily life. The program will promote nutritious food, clean water, and sanitary behaviors such as hand washing. The THSP plans to use the maternal care group methodology and the community based capacity building activities to address these inter-linked facets of life in Tambacounda. C-IMCI will be the primary strategy used to stress the key practices that will improve the nutritional status of women and children in the intervention zone.

Exclusive Breastfeeding: An essential component of the program's nutrition intervention is the focus on exclusive breastfeeding up to 6 months. The program will use the positive deviance approach working through the women's groups to reinforce this practice. According to the baseline survey, only 24% of mothers reported exclusively breastfeeding their infants for 6 months, while 68% offered other foods to their children after delivery. During the DIP planning workshop, it was revealed that it was often the influence of the grandmothers on the father's side that prevented a mother from practicing exclusive breastfeeding. In addition, women did not understand the importance of giving the child colostrum after birth. To counter the influence of the grandmothers in infant feeding, the program will target grandmothers for IEC/BCC activities. The maternal care groups within the women's groups will include grandmothers, mothers-to-be, and other women of reproductive age. The CHW will be responsible for educating these women on the benefits of exclusive breastfeeding using a model mother and infant as an example.

Vitamin A/Iron Supplementation: The prevalence of anemia among pregnant women in this region is approximately 50% (DHS, 1999). The MOH policy is that pregnant women are to receive iron supplements for the duration of pregnancy. Because many women still do not seek prenatal care, iron supplementation is low. Even among those who seek prenatal care, the majority makes only one visit. As a result, women are not supplied with a sufficient amount of pills for the duration of her pregnancy. Iron folate tablets are widely available, and understanding of its importance is building among the population. Because anemia contributes to a wide variety of problems during the course of pregnancy and postpartum, the maternal care group approach will help ensure that pregnant women are all provided iron supplementation as needed. To help with compliance, the maternal care groups, supported by the CHW, will stress the importance of taking the pills for the entire duration of pregnancy.

Vitamin A supplementation has proven to be an important intervention in maternal and infant health. Severe sub-clinical vitamin A deficiency has been found to be widespread in various parts of Senegal (WHO, 1995). No prevalence studies have been conducted in the Tambacounda Region. Current government policy is to distribute vitamin A during National Immunization Days once a year. UNICEF, working in the Tambacounda region, seeks to improve supplementation of Vitamin A for children every six months. The program can help UNICEF achieve this goal in its work with CHWs, TBAs, health committees, health centers, home visits, and care groups. Vitamin A supplementation is a powerful strategy that THSP can promote and administer in remote villages and communities. The program will

also work with the women's groups to identify foods that they are currently fortifying and producing that are nutrient dense (vitamin A rich). These will be promoted for local consumption. According to national protocols, vitamin A will be administered to women 42 days after delivery.

Growth Monitoring: Africare is currently managing two nutritional interventions in Tambacounda, the *Projet d'Appui et de Renforcements des Interventions en Nutrition et Santé* (PARINS) financed by the World Bank, and the Maka Community-Based Health Program financed by the Japanese government. These interventions cover the seven neighborhoods in the urban center of Tambacounda (*Abattoir, Camp Navétance, Dépôt, Gourel Diadji, Liberté, Médina Coura, Plateau, Pont*). The PARINS program is implemented in the Commune of Tambacounda and uses the community-based IMCI framework to reach 6,431 children between 0 and 36 months and 3,288 pregnant women. The THSP will work through 17 education and recuperation sites that are managed by 17 health committees. The program will create a community system for data collection, analysis and restitution for action. It will also offer community-based services for nutrition, including growth monitoring and nutritional recuperation.

The Maka Community-Based Health Program is currently being implemented in 6 villages of the Maka District (*Kanouma, Kanta, Sankabari Bacary, Hoquéré, Cissé Counda, Mboulembou*) and is financed by JICA. The goal of this project is to reduce maternal and infant morbidity and mortality in the District of Maka through increased utilization of the health structures by pregnant women, increasing the knowledge and use of family planning practices (including the prevention of STIs/HIV/AIDS), improving the capacity of the health system, reinforcing health services in the health huts, and improving the quality of those services. To date, Africare has constructed and equipped 6 health huts and in conjunction with the community have created corresponding management committees. In addition, 6 credit committees have been formed to manage income-generating activities and 12 TBAs and 30 CHWs have been trained. These community workers have already begun to conduct IEC/BCC activities including community-based distribution in essential medicines and contraceptives. Women's group members will be trained in this intervention to effectively carry out growth monitoring activities.

These two programs will be integrated in the THSP as pilot sites for growth monitoring activities in the first two years of the program with plans to scale up to other program areas in years 3, 4 and 5. Africare has chosen these sites because they are already well equipped with scales, height gauges and an adequate supply of essential medicines and insecticide treated nets. Further rationale for the choice of these activities is the necessity of weighing activities in the nutritional intervention to ensure adequate growth and nutritional status of children. However, because of the lack of suitable facilities throughout the health district and the lack of funds, Africare will only use these proposed sites as test sites for the proposed weighing activities. Additional funding will be secured to enable these essential activities to be carried out in the entire health district.

At the test sites, children will be weighed regularly. Those not growing according to age and height will be referred to the CERN. After completing recuperation activities for the malnourished child, the staff at the CERN, in collaboration with the Women's Groups, will be educated on proper nutrition for their infants and participate in food preparation demonstrations held at the center. Children who fail to grow will be referred to the women's group in their village for help in obtaining nutrient-dense foods.

Other Nutrition Activities: The program will support efforts to raise poultry for local consumption, as it is nutrient-dense. The women's groups are currently investing in this activity. Mothers will be encouraged to feed their children this meat and to increase the variety of the foods. Women's groups are also fortifying other local foods. The women's groups will benefit from micro-credit to expand these activities. CHWs working with the women's groups will integrate key messages during food demonstrations.

Intervention Specific Approach: BCC, Access, Quality

Behavior Change Communication: Nutrition education and other aspects of nutrition will be reinforced through the use of maternal care groups and CHWs. The program will train CHWs in targeted aspects of nutrition, with a focus on immediate breastfeeding after delivery, and exclusive breastfeeding for 4-6 months; frequent, nutrient dense complementary feeding and continued breastfeeding until 24 months; and nutritional management of diarrhea. Health post nurses and CHWs will be trained to provide vitamin A treatment for diarrhea and measles (as part of IMCI) and distribute iron supplements to women during pregnancy according to MOH standard protocols, in order to support more remote communities. The use of iodized salt will also be promoted in the program area. During the DIP workshop, it was revealed that although iodized salt is available in the program area, mothers do not use it in preparing their foods.

Women's groups will be essential to attaining the nutrition objectives. The women's groups are involved in food processing, fortification, and distribution. The program will foster greater collaboration with the women's groups and the CERNs (*Centre d'Education et de Récuperation Nutritionelle*) to hold food preparation demonstrations. In the villages where access to the CERN is difficult, the program will work through women's groups to host demonstrations within the maternal care groups. This self-reinforcing mechanism will be key to ensuring that pregnant women are sufficiently nourished to carry a healthy newborn to term. Because women of all ages will be incorporated in this activity, it will help them learn from each other and improve their own household practices.

IEC/BCC activities are intended to have a spillover effect in the program area. While women will be targeted for these demonstrations because of their traditional role in the family, their knowledge will also have an effect on the entire family. The existing CHWs in the program area will be trained and will have the responsibility of going into the village communities to speak of the importance of key activities for the health and well-being of the mother and child. They will work in conjunction with the program CHWs in gaining maximum coverage of the program area and educating the community on matters relating to nutrition throughout the life of the program.

The program will use IEC materials from the PAIN (*Paquet d'activités integrées pour la nutrition*)— the national protocol for addressing malnutrition—as well as the C-IMCI framework to develop a core set of key activities to improve maternal and child nutrition. Mothers will provide positive models for expecting mothers on proper nutrition for the infant. By engaging grandmothers in the process, the program intends to a positive influence on the behaviors of women participating in the maternal care groups.

Quality: The program will use readily available and tested materials in its IEC/BCC activities. These include tools developed by BASICS such as comprehensive training

manuals for training CHWs in maternal and child health, and the WHO/MOH manuals for training health post staff in IMCI and the management of illnesses.

The THSP will use existing trainers to assist in the training of other health post staff, TBAs and CHWs. Using the pre-approved manuals, the program will ensure that the information imparted to these trainees is of the highest quality and that the information is uniform. By retraining existing CHWs, the program will ensure a level of uniformity that will be important for IEC/BCC activities throughout the entire program area.

The program will closely supervise its CHWs. They will conduct community-based distribution with the help of a management committee that is located within the women's group and is already performing management functions. This group will ensure continuity in the revolving drug fund and help ensure consistency in product availability. The CHWs will be required to report on all IEC and Community-Based Distribution (CBD) activities to the management committee, as well as to the program supervisors. The program supervisor will receive the necessary training to ensure that appropriate data are collected and that the CHWs are diligent in their reporting. The CHWs will be linked to the nearest health facility to go over program level data with qualified health professionals and discuss problems encountered. This will be done on a quarterly basis.

Control of Diarrheal Diseases (10%)

Approach: Diarrhea case management will constitute a 10% level of effort within the context of the Tambacounda Healthy Start Program. The KPC revealed that 45% of the mothers reported that their children had suffered a case of diarrhea in the two weeks prior to the survey. Less than half (48%) of the mothers knew the causes of diarrhea and only 52% of mothers who reported that their child had suffered a case of diarrhea used ORT. The main objective of this program component is therefore, to educate communities on the causes of diarrhea and methods of prevention including key behaviors such as use of ORT, hand washing, treatment of water, sanitary disposal of feces, etc, and recognition of danger signs for reference. The program will also build on UNICEF's current interventions in the area of improving water infrastructure in Tambacounda by promoting key preventive behaviors to reduce the incidence of diarrhea in the communities.

Diarrhea Case Recognition and Management: The program will improve diarrhea case management at the community level through the training of 400 community health workers in the causes, prevention, and treatment of diarrhea using ORT. The CHWs will be responsible for training care group members, mothers and community members in general on diarrhea including appropriate care seeking practices, and the danger signs in need of referral to a health facility. For simple cases that are easily treated in the home, community health workers will educate mothers on the use of ORT, a product that is widely available in Tambacounda. CHWs will also focus messages on the importance of continued breastfeeding if child is breastfed, frequent feeding during illness, and catch-up feeding following a diarrhea episode.

Hygiene Promotion: Community based prevention efforts will center around hygiene promotion with specific emphasis on: 1) Proper hand washing (with soap) at critical times (after defecation, after handling children's feces, before preparing food, and before feeding children/eating); 2) Sanitary disposal of human feces; 3) Treatment of water in the household possibly through treatment with bleach or through boiling; 4) Protection of drinking water

from contamination; and 5) Protection of food from fecal contamination. Community Health Workers and program staff will also work with health committees to revive village level sanitation committees. These committees are responsible for maintain a sanitary environment around the village. (This was a reccomendation from the DIP restitution workshop)

Intervention Specific Approach

Behavior Change and Communication: The KPC revealed low care seeking behavior among mothers in the case of diarrhea. Moreover, there was low prevalence of hand washing at key points (7.3%). CHWs will be instrumental in increasing mothers' knowledge of the key behaviors that can prevent diarrhea incidence as well as promote appropriate care seeking practices in the case of diarrhea in children. CHWs will be trained in key BCC messages, namely continued intake of liquids and foods (for children over 6 months) and recognition of danger signs including severe dehydration.

Community mobilization and sensitisation activities will focus on promoting sanitation and hygiene at the household level with hand washing facilities, encouraging caretakers to use ORS and readily available fluids mainly from cereals such as porridge and to seek immediate care when the child is sick. Awareness creation channels will include drama shows/films, household visits by the CHWs and distribution of IEC materials on diarrhea. Positive behavior change outcomes such as washing hands after latrine use with soap/ash, correct use of ORS and locally available fluids will be sustained through constant reminders by community health workers at the household and community levels through mobilization and sensitisation activities.

To further sustain the program's BCC interventions, THSP's behaviour change communication activities will build upon current efforts by UNICEF to increase water availability in Tambacounda through the construction of safe water points. It has been shown that knowledge of key preventive behaviors for diarrhea is unsustainable without means for populations to adopt these behaviors.[2]

Since submitting the final DIP in July, Africare Senegal has also explored the possibility of conducting operations research on the use of zinc in the treatment of diarrhea. This activity will likely be funded in the course of the next year and will be further detailed in the program's annual report.

Access: The health facility assessment revealed that many of health facilities did not have oral rehydration units. However, ORS is widely available in the communities. To ensure continued access to ORS, the project will work with the district on a logistics plan to ensure regular procurement and availability at the community levels. The program will facilitate the procurement of stocks of ORS by care groups, to increase access at village level. In addition, the community health workers will have ORS as part of their kits and will avail the packets to community members in need.

Quality: As mentioned above, the program will use readily available and tested materials in its IEC/BCC activities. These include tools developed by BASICS such as comprehensive

[2] Africare's Uganda Child Survival Program has shown the impact of these tangible benefits on the population in adopting key behaviors.

training manuals for training CHWs in maternal and child health, and the WHO/MOH manuals for training health post staff in IMCI and the management of illnesses.

In addition, working in close collaboration with the health facility personnel, the program will ensure that appropriate messages are being delivered at the community levels. This will be accomplished through regular support supervision conducted by the project staff and the health facility staff. As the link between malnutrition and diarrhea is clear, the community health workers and other community volunteers will have a constant opportunity to reinforce key messages during growth monitoring activities which are conducted with the support of the health facility staff.

The quality of operations research will be assured through close collaboration with the district hospital and health personnel and through the use of qualified consultants who will be able to follow up children who receive zinc supplementation and report on the results.

Malaria (20%)

Approach: The main objective of THSP's malaria component is to improve appropriate malaria recognition and case management at all levels, particularly the home, community, and health facility. The second component is community-based mosquito bed net sales by trained CHWs and women's groups. Activities at the community level will address health education, mobilization, availability of essential medicines and supplies, and referral systems. The main strategy to address malaria in the program will be community IMCI, which will cover recognition and better case management of malaria in the household/community and health facility and the promotion of key preventive and care seeking behaviors.

Improving Case Recognition and Management: The program will improve the quality of care by community-based providers to better recognize the signs of malaria and manage the simple cases at the community level. The program will train 400 new CHWs and will retrain 200 existing CHWs in these topics. The CHWs will be responsible for educating women and communities on how to recognize danger signs and when to refer severe cases to the health hut/post/center. Community based malaria intervention topics will include:

- Prompt treatment of fever with dual therapy as per the new treatment protocols
- The importance of taking the full course treatment once it is started
- Danger signs indicating cerebral malaria or pneumonia which require referral
- The importance of IPT for pregnant women
- Use of ITNs, particularly for pregnant women and children under five
- When and how to re-treat ITNs

The MOH's preferred dual therapy is amodiaquine plus sulfadoxine pirimethamine (fansidar). At present, it is not the national protocol to distribute these drugs at the community level using CHWs. The program anticipates that this may change during the life of the program. For now, the program will train CHWs on the need for referral for treatment at the nearest health facility. The program will work with the target communities to develop a referral and transportation system for severe cases of malaria.

In order to better improve case management at the community level, the program will also hold a workshop with traditional healers to discuss the signs of malaria, appropriate treatment and danger signs requiring referral to a health facility. The program recognizes that in many cases, traditional healers are the first line of defense for illness, especially malaria at the

community level. This exchange workshop will increase their capacity to diagnose the signs and recommend appropriate treatment for their clients.

Health Post Level: The KPC revealed that 78% of women interviewed had taken some form of anti-malarial during their pregnancy and that for the most part they had used chloroquine (96%). Chloroquine is no longer the first line drug. The MOH has instead recently opted for the use of sulfadoxine pirimethamine for the treatment of malaria in pregnant women. The MOH is training all of its agents in the new IPT protocol.

Community Based Distribution of ITNs: The THSP will support local efforts to sell high quality ITNs at a reduced price at the village level through women's groups, health huts and other health posts. Africare will purchase an initial stock of ITNs to be included in the initial stock of items for community-based distribution by the CHWs. Since the CHWs will be chosen from among the women's groups, the management committee of the women's groups will be the principal control mechanism for these items. Untreated nets are currently being sold in the commune for 1,500 CFA. In the more rural areas, Africare will work with the community and the management committee to set an affordable price.

PermaNet, a major distributor of ITNs in Senegal, with products made under Danish management, offers a 35% reduction in price for Africare sponsored activities. These nets will be provided to women and children at substantially reduced prices as part of a package of benefits that the care group strategy offers. Women can purchase a net directly, or negotiate to pay for the net over time. There are many ways to bring information and supplies to remote communities in need; the groups and committees will decide what method is best for them. The aim is to improve access and use of nets for all women and children. These mechanisms will be further detailed through local discussions and community level decisions.

The permanently treated nets are not widespread in the program area. Because there are many points of sale for bed nets, including the pre-treated nets, re-treatment of ITNs will be an important component of this strategy. The program will create 40 re-treatment posts that will be managed by area CHWs. Not all CHWs will be trained in re-treatment techniques in order to maintain profitability. These particular CHWs will be given the re-treatment solution to be included in their entire stock of items for community-based distribution. Insecticide is available at standard prices through the national pharmacy.

Africare has investigated using the private and public sectors to market ITNs, and can obtain these nets at a substantially reduced price. This intervention will use the same distribution systems as described under the maternal and newborn care intervention to assure availability of drugs, ITNs, and insecticide for net re-treatment at the community level. In general, mosquito nets are also typically available in markets and at central health posts, although the cost (3,500 CFA) has proven to be beyond the perceived purchasing power of most residents.

Intervention Specific Approach: Behavior Change Communication, Access, Quality

Behavior Change Communication: CHWs will be instrumental in increasing the knowledge base for malaria and promote the key practices to contribute to a reduction in the incidence of malaria in the program area and an increase in the use of ITNs by women and children. During the KPC survey, only 18% of women reported having slept under a mosquito net the night before. Although many households may possess a mosquito net, it is usually reserved

for the head (man) of the household. Because of inadequate resources, most families may not be able to purchase more than one mosquito net.

CHWs will work with the maternal care groups to establish a revolving credit fund for the purchase of ITNs for the pregnant woman. Depending on the mechanism that the group decides upon, women may be able to purchase the net on a monthly installment basis.

The CHWs will also be responsible for participating in social mobilization activities. These activities will be conducted on a semi-annual basis during Africa Malaria and World Health Days and during the rainy season when malaria is more prevalent. The program will engage the local troupe Bam Tare and use traditional means of communication to increase local participation.

Access: Because of lack of health facilities throughout the program area and the affinity of the population to use traditional healers as their first line of defense for sickness (especially for malaria), the program aims to increase overall access to health services and service delivery by trained professionals. This does not mean a negation of the services that traditional healers offer, but rather better collaboration between this private sector group and the program collaborators. The one-day workshop with traditional healers will build their capacity to recognize the signs of malaria that require immediate referral as well as enable them to better advise their clients. This approach will further strengthen the capacity of communities to manage malaria.

Quality: To ensure quality of health post services, it is vital that essential drugs are consistently available and that equipment (especially for obstetric emergencies) is functional. The program will work with the health post staff to ensure timely restocking of health huts and CHWs for the continuation of community-level activities. Monthly debriefing meetings between management committees and CHWs, field agents and health facility staff will enable them better plan their orders based on the sales and demand. The program is also looking towards the creation of buffer stocks at the health huts/posts for regular restocking of the CHWs. The health committees will be instrumental in ensuring regular procurement according to sales and consistent availability of all medications through regular meetings with CHWs, health post staff and TBAs.

The program will develop a procurement system that relies on nationally accepted drugs. These drugs will be acquired from the national pharmacy, thereby ensuring their quality. In addition, insecticide treated nets will be acquired from PermaNet, the major distributor of ITNs in the country.

Training of health post staff in the new treatment protocols will also help ensure quality treatment for pregnant women.

CAPACITY BUILDING

An essential component of the THSP is training that builds the capacity of the health system and the communities to better address the problems linked to maternal and child health, nutrition and malaria.

Health System: The Health District of Tambacounda has established the following priorities:

1-Decrease maternal and children mortality

2-Decrease infectious diseases

3-Assure proper functioning of the Health District

4-Monitoring and evaluation of health programs
(NB. The newly formed Koumpetoum District is in the process of developing its priorities and plans)
The Tambacounda Healthy Start Program will build the capacity of the health districts by training health post staff; training community-level workers including TBAs and CHWs; increasing collaboration between the health system and traditional healers; and fostering better collaboration between other local groups that are currently involved in health promoting activities, including women's groups.

Health Facility Level: Health facility staff will benefit from training related to the national protocols for the management of malaria in pregnant women, management of newborns, and counseling in family planning.

Because of issues relating to quality of care at the health facilities, the program will also train health facility staff and reproductive health counselors in the Client-Oriented Provider Efficient Services (COPE) methodology. The goal of this training is to help providers of reproductive health care become more aware of their clients' needs and use available resources more efficiently to improve the quality of services. Use of COPE tools will allow the program staff to target a broad range of reproductive health services including, including prenatal, postpartum and newborn care; labor and delivery; STIs and HIV/AIDS. The COPE methodology will enable the trainee to understand the importance of 1) establishing rapport with the client; 2) focusing on individual needs; 3) communicating medical information clearly; 4) giving clients their choice; and 5) planning the next steps. This will be especially important for follow up visits during the women's pregnancy and catering to the women's reproductive health needs including birth spacing.

Nearly eighty percent of the women in this region give birth at home, with only the support and know-how of the village TBA. Her ability to respond appropriately under both normal and difficult conditions will decide the fate of both mother and newborn. Therefore, practical skills development is the crucial element behind capacity building programs, in order to heighten performance levels of these key community members. The THSP will emphasize targeted and practical training for TBAs in safe and clean deliveries and for health post nurses in Emergency Obstetric Care. The program will collaborate with the American College of Nurse Midwives to ensure the accuracy of training modules.

The training plan for all program collaborators is as follows:

Activity	**Target Group**	**Content**	**Trainer**
MALARIA			
Refresher training on standard case management and management of malaria in pregnant women according to national protocols	Health Facility Staff	Use of IPT for pregnant women; correct dosage and duration of fansidar; care of severe cases	District Health Team
Training on malaria case management at the community level	400 new CHWs; 200 existing CHWs; 280 TBAs; traditional	Malaria transmission; prevention (using ITNs); recognition of danger signs; promotion of	District Health Team/Africare

	healers	malaria prophylaxis for women; communication and behavior change strategies	
Training in net re-treatment	40 CHWs	Timeline for net retreatment, techniques	Africare
SAFE MOTHERHOOD			
Training of trainers in safe motherhood/EOC[3]	12 District health staff	Safe motherhood/EOC management, prenatal care, etc.	District Health Team/Africare
Refresher training in ANC/EOC (see above)	70 health facility staff (midwives)	Monitoring pregnancy, identification and management of risk factors, diagnosis of pathologies related to pregnancy, management of malaria in pregnancy, etc	District Health Team
Revolving Fund for Health	400 women's groups	Creation; maintenance; uses of funds; financial management; record keeping; development of community mobilization and transport system for EOCs	District Heath Team
Training in Data Collection	280 TBAs	Types of data to be collected; uses of data	District Heath Team
Training/Refresher Training in Life Saving Skills	280 TBAs	"Saving Life Skills" Module; Theory and practice of child birth; clean and safe deliveries; Importance of prenatal care; identification of complications; Importance of TT, iron folate, vitamin A; protocols for supplementation; schedule	District Heath Team
Training in Family Planning and counseling	FP counselors; auxiliary health facility staff	Communication techniques, contraceptive methods	District Heath Team
Training in importance of TT; iron folate, vitamin A	200 TBAs, CHWs	Importance of TT, iron folate, vitamin A; protocols for supplementation; schedule	District Heath Team

[3] The District has already conducted this training.

Training in recognition of danger signs and referral	200 TBAs; CHWs	Danger signs in need of referral	District Heath Team
Training on importance of immediate and exclusive breastfeeding	200 TBAs, CHWs	Importance of colostrum for newborn; importance of immediate and exclusive breastfeeding	District Heath Team
Training of Community health committee members	200 members of health committees in villages where there is a health hut	Health committee creation; composition, role and responsibilities of members; statute; management of resources; primary health care	Africare/District Health Team
Training in Client Oriented Provider Efficient (COPE)	All community-based and health-facility workers; TBAs and health facility staff and Africare supervisors	COPE methodology	Consultant/ Africare
NUTRITION/EXCLUSIVE BREASTFEEDING			
Training in general nutrition principles	CHWs	Exclusive breastfeeding; importance of feeding during illness; nutrition during pregnancy; identification of underlying causes of malnutrition; vitamin A and iron rich foods	District Health Team/Africare
Growth Monitoring	CHWs; women's groups involved in GM activities	Importance/Techniques of GM	District Health Team/Africare
Training in nutrition promotion and counseling	CHWs; women's groups involved in GM activities	Communication and behavior change strategies	District Health Team/Africare
Training of auxiliary health staff in vaccination techniques	30 auxiliary health staff	Vaccination techniques for advanced strategies, identification of missed opportunities	District Health Team
Training of Trainers in C-IMCI	12 District Health Staff	C-IMCI	Africare
CONTROL OF DIARRHEAL DISEASES			
Training in diarrhea case recognition, management	CHWs women's groups	Recognition of danger signs of diarrhea that require immediate care from an appropriate provider; early use of	District Health Team/Africare

		ORS; continued breastfeeding if the child is breastfed; frequent feeding of small amounts of food during diarrhea, and catch-up feeding following the diarrhea episode.	
Training in hygiene promotion	CHWs; women's groups	Key BCC messages including increased intake of fluids/foods; proper hand washing (with soap) at critical times (after defecation, after handling children's feces, before preparing food, and before feeding children/eating); sanitary disposal of human feces, especially the feces of young children; Treatment of water in the household; Protection of drinking water from contamination using local technologies; protection of food from fecal contamination.	District Health Team/Africare
Training/orientation in correct utilization of ORS	CHWs, Care Groups		

Community Level: Africare's work through the Federation of Women's Groups, a local NGO with representation in 500 villages of the Tambacounda and Koumpemtoum Health Districts will serve a number of purposes. For one, Africare will be building the knowledge base of its members through the selection and training of a member within the group to serve as a CHW. Second, the collaboration will open these local initiatives up to increased access to micro-credit. Third, this collaboration will begin a process of sharing and reinforcing community mechanisms to improve the health status of mothers and children throughout the health district.

Thematic areas of capacity building for local partners are illustrated in the following table:

THEME	**PARTNER**	**TARGET NUMBER**	**DURATION**
Organizational Functioning	Women's Groups	400	2 days
Group Dynamics	Women's	400	2 days

	Groups		
Community Health Funds Management & Good Governance	Women's Groups	400	2 days
Marketing	Women's Groups	400	3 days
Entrepreneurial Spirit	Women's Groups	400	2 days

Community-Based Health Information System: Currently Tambacounda area TBAs collects the following data:

- Number of WRAs
- Number of pregnant women
- Number of home deliveries
- Number of deliveries in health huts (where there are health huts)
- Number of pregnant women receiving iron (where there are health huts)
- Number of diarrhea cases (where there are health huts)
- Number of diarrhea cases referred to health posts (where there are health huts)
- Number of malnutrition cases seen (where there are health huts)
- Number of women starting exclusive breastfeeding
- Number of women who finished exclusive breastfeeding
- Number of referrals
- Number of births
- Number of abortions
- Number of deaths in childbirth
- Number of women referred for family planning services
- Number of women referred for ante-natal care

CHWs collect:

- Data concerning the number of products distributed by CBD (iron, vitamin A, ORS, condoms, and spermicide)
- Data concerning IEC/BCC activities (number of group discussions, number of home visits, number of counseling sessions, number of discussions, number of video projections)
- Number of sick children referred
- Number of STIs referred
- Number of cases of infertility referred

The community health committee collects:

- Number of paid consultations per month
- Number and kind of medicines sold
- Number of ITNs sold
- Number of ITNs retreated
- Amount of credit distributed

District Level Health Information System: Currently the district health post staff collects the following data:

- Number of consultations
- Number of pregnant women who deliver

- Number of family planning referrals
- Number of pregnant women for antenatal care
- Number of deaths in childbirth
- Number of births
- Number of referrals for growth monitoring
- Number of bed nets in stock, sold
- Number and kinds of drugs in stock, sold

Integration of Community and District Level Health Data: At present there is no formal system linking community level data to the health facility data. The program will facilitate quarterly feedback sessions including the district level staff and the community level workers so as to foster exchange of information. Community level staff will also be able to ask questions on cases they may have encountered at the community level, thereby reinforcing their capacities and skill base. Because of Tambacounda's location, the coverage of the population offered by THSP will allow the district health systems to understand the health issues encountered in villages where access to care is non-existent. CHWs will report on activities to their supervisor on a monthly basis. TBAs at the health huts already collect information that is sent to the health posts and the midwives. The District Medical Officers will participate in these review sessions on a quarterly basis and use the data for planning purposes during the monitoring sessions organized by the MOH.

The THSP will allow TBAs and CHWs to improve data collection. The purpose of the community-based HIS is to track maternal and child health data at the community level and allow communities to use this information to inform decision-making and action. The HIS will be further refined in collaboration with the village health committees, CHWs and other health staff whom the program will train in the use of data-gathering tools, compilation and reporting. The CHIS will capture information on vital events (deaths, births, and referrals) with focus on children under five and pregnant women. It will compile data on critical behaviors such as bed net use, completion of immunization, and prenatal care seeking. Additional data will be compiled in collaboration with the health huts where weighing activities are taking place on the nutritional status of children under five. All community level workers will be required to collect information on the number of referrals made, in addition to the number of births.

Sources of data will include the CHW/health committee records for CBD and IEC/BCC activities, women's groups on IGA and other nutrition-related activities and health facilities records.

Data Collection (Program Level)

Data Source	Sample Documents	Information Collected	Frequency
CHWs	Activity notebook	Number of IEC activities, home visits, number of CBD items sold, number of referrals given, number of infants monitored on growth, number of food demonstrations, numbers of people attending various activities,	Monthly

Data Source	Sample Documents	Information Collected	Frequency
		number of drugs sold	
TBAs	Activity notebook	Number of pregnant women, number of births, number of referrals to health facility, exclusive breastfeeding,	Monthly
Health Committee/ Women's Groups	Activity/purchase/sale notebook	Number of loans given, number of items sold, profits from sale of CBD items, number of IG activities, number of hygiene kits distributed	Monthly
Health Facility Staff	Activity notebook	Number of pregnant women, number of births, number of referrals from community to health facility	Quarterly
KPC	KPC Report	Outcome/impact data	Baseline/Final
LQAS	Midterm Evaluation Report	Outcome/Impact data	Midterm

Other data sources throughout the life of the program include two KPCs (baseline and final), an LQAS (mid-term), several PRAs, a number of targeted qualitative assessments and operational research surveys.

3. Program Monitoring and Evaluation Plan

The baseline KPC survey was conducted with representation throughout the intervention zone. The baseline and final surveys will be used to measure program impact. The midterm LQAS and program monitoring data (C-HIS) will be used to assess program progress and strategies, and make adjustments where necessary. In addition, Africare has conducted a baseline participatory institutional assessment for area CBOs, and a Health Facility Assessment (HFA) in the MOH health posts where the program will be working. These assessments, and the resulting work plan with indicators (see next section), provide the basis for monitoring and evaluating institutional capacity building. The program will also conduct preliminary qualitative studies on beliefs, attitudes and practices with respect to maternal and newborn care (for example, knowledge and beliefs about anemia) and malaria (for example, local practices and net use) in order to better tailor these behavior change strategies.

The program will rely on quarterly reports generated by the MOH and Africare field supervisors for monitoring program activities and inputs. Health post reports currently include sickness consultations, family planning and prenatal visits, and attended deliveries with their outcome and report monthly on outreach activities. Prenatal and delivery and diarrhea and malaria consultations will be used to monitor service utilization and obstetric complications. The program will also monitor MOH activities including supervision, outreach, and other activities on the action plans. Africare field supervisors will be responsible for collecting information on activities at the community level. CHWs and health committees will track sales of medicines and money received as part of managing the

revolving funds. They will also collect information on activities related to income generation and credit, transport systems and referral. They will track individual pregnant women and un-immunized children under five in order to assure coverage through essential preventive activities including birth planning. This information will be compiled by the field supervisors and reviewed by health committees, health post staff, and program staff.

The program will particularly focus on documenting its lessons learned in: C-IMCI, cost recovery at the community level, institutional capacity building, and integration of micro-credit and health programs. These will be emphasized during midterm and final evaluations. Results can be disseminated to the child survival community through CORE and Working Group meetings (IMCI, malaria, and safe motherhood).

- Program staff and local partners receive exposure in small-sample survey design, data collection, and analysis including graphic presentation and use of information for program design.
- Program staff and local partners use their skills by participating in baseline and end-of-program surveys with both quantitative and qualitative data.
- Program stakeholders develop ownership and integral understanding of program-generated data as well as relevant secondary data and studies.

The program will attain the first two objectives by involving key program stakeholders (program staff and local partners) in the design of formative qualitative research. An integral part of program planning is developing an M&E plan and a C-HIS system that emphasizes selectively collecting data that are conscientiously used to improve service delivery and program results.

The end-of-program survey and final evaluation again provide important opportunities for strengthening M&E skills of program and partner staff in small-sample survey design, data collection, analysis, and interpretation of behaviors and practices adopted by mothers and caretakers of infants and young children. The final evaluation will also involve program stakeholders in investigating the program's capacity-building outcomes that have aimed at sustaining high quality and extended-coverage service delivery. Additional program outcomes may increase local competence in terms of broader maternal and child health (MCH) knowledge, monitoring of quality of care and health workers' performance, and organizational structures developed at the community level. Small-sample survey implementation also provides an opportunity to build capacity within the CBOs. Implementation of the PMP includes a baseline survey, programmatic needs assessment, assessment of commodities and surveillance systems, measurement of process results (semi-annual, such as C-HIS data, monthly reports, etc.), measurement of objectives and indicators (KPC), mid-term LQAS (after 2 ½ years), and final evaluation (after 4 ½ years). THSP will be implemented directly over a period of five (5) years.

Monitoring Health Worker Performance: To monitor and improve the performance of health workers, the program will provide continuous refresher trainings in the intervention topics through a training of trainers, taking into account any changes in national protocols, such as malaria case management. Pre- and post-tests will be used to determine the effectiveness of the trainings. With the community-based HIS, the program staff will work with the district health staff to monitor data and identify further training needs. Program supervisors, using supportive supervision techniques, will visit CHWs regularly and assist them in their social mobilization activities. Supervisors will also use direct observation

techniques, checklists, and discussions with community groups and focus groups with clients to monitor progress.

To promote quality of service, program activities will be implemented under nationally accepted guidelines, using tools and training manuals developed by program partners including BASICS, WHO and UNICEF. The program will also use the district health teams' supervision checklists to monitor community level health activities.

The M&E skills of local staff and partners will be strengthened in the following ways:

- Participation in baseline, midterm and final evaluations
- Participation in program steering committee and monitoring/planning workshops
- Participation in the identification of program indicators
- Integration of community-based HIS with the district's current reporting system

Operations Research: The THSP will carry out a number of operations research activities, including 1) the use of TBAs to decrease maternal mortality; 2) the use of women's groups to promote maternal and child health; 3) involving grandmothers in mother and child health projects. A fourth area has potential to be added, namely use of zinc in treatment of diarrhea episodes.

4. Work Plan

Program Goal: The overall goal of THSP is to decrease morbidity and mortality rates of mothers and children under one year of age by strengthening community based health care services and information and community linkages with the health care system.

Objective#1: Increase access to, demand for, and use of quality maternal and child health services.					
Indicator #1: Percentage of women making at least three ANC visits. Benchmark: 33%. Target: 60% (KPC: BL, FE.LQAS: ME) **Indicator #2:** Percentage of deliveries attended by skilled birth attendants. Benchmark: 45% Target: 60% (KPC: BL, FE. LQAS: ME) **Indicator #3:** Percentage of newborns breastfed during the first hour after birth. Benchmark: 20% Target: 30% (KPC, LQAS) **Indicator #4:** Percentage of women using a least one modern method of contraception. Benchmark: 10% Target: 13% (KPC, LQAS)					
Major Activities	**Activity Focus**	**Time Frame**	**Personnel**	**Benchmarks/Targets**	**Status/Comment**
Household Distribute iron to pregnant women Make IEC/BCC home visits to pregnant women	A BC	Starting January 2005 Starting January 2005	400 CHWs 400 CHWs	Procurement/distribution mechanism for iron established and functioning Home visits made on a regular basis as per CHW activity log	Baseline: 80% Target: 90%
Community Meet with women's groups to organize maternal care groups Develop contribution system for maternal care groups Procure initial stock of iron and Vitamin A	A, BC, Q A, Q A A, Q	August 2004-August 2005 August 2004-August 2005 Before December 2004	450 women's groups 450 women's groups 600 Care Groups 600 Care Groups	Meetings with women's groups held/care groups organized Regular contributions from group members per mechanism established Procurement/distribution mechanism for Vitamin A, hygiene kits established and	

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Major Activities	**Activity Focus**	**Time Frame**	**Personnel**	**Benchmarks/Targets**	**Status/Comment**
Procure hygiene kits for safe and clean births Procure birthing kits for TBAs Develop referral and transport system within each community Implement IEC/BCC activities (theater, group discussions)	A, Q A BC	Starting August 2005 Starting August 2005 Starting August 2005 Starting August 2005	450 Women's Groups Africare, MOH 600 Care Groups 400 CHWs	functioning Birthing kits procured and distributed to all trained TBAs Referral and Transport system established and functioning within each village CHWs regularly conducting IEC/BCC activities as per activity log	
Health Facility Supervise TBAs	Q	Starting March 2005	27 Health Post nurses 1 Health Center nurse	Supervision of TBAs done on a monthly basis by either the Midwife or the Health Post Nurse	

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Major Activities	**Activity Focus**	**Time Frame**	**Personnel**	**Benchmarks/Targets**	**Status/Comment**
District Train 12 trainers in reproductive health, family planning, IEC/BCC	A	July 2004	District health staff	12 trainers trained in RH/FP	• # Revolving funds being re-supplied regularly without stock outs • # Care groups operational at the end of the program • # Health post services and systems independently managed and controlled % Volunteers still active at end of program that are
Train 400 CHWs in reproductive health, family planning, IEC/BCC	A, Q, BC A, Q	August 2004-August 2005	12 trainers	400 CHWs trained in communication techniques for RH/FP	
Train 12 trainers in life saving skills	A, Q	August 2004	Consultant ACNW	12 trainers trained in Life Saving Skills	
Train 200 TBAs in saving life skills	Q	September 2004-September 2005	12 trainers	200 TBAs trained in Life Saving Skills	
Train 30 nurses on supervision techniques	Q	January 2005	District health staff	30 nurses trained in supervision techniques	
Organize exchange visit to Kebemer (MCH pilot site) for district and program staff		August 2004	Africare Africare	Exchange visit organized and conducted Supervision of CHWs	

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Major Activities	**Activity Focus**	**Time Frame**	**Personnel**	**Benchmarks/Targets**	**Status/Comment**
Supervise 400 CHWs		Starting March 2005	District Health Teams	by field agents conducted monthly	

Objective#3: Improve nutrition of women and children, including Vitamin A supplementation and exclusive breastfeeding.					
Indicator #1: Percentage of mothers practicing exclusive breastfeeding for six months. Benchmark: 24% Target: 30% (KPC: BL, FE. LQAS: ME.) **Indicator #2**: Percentage of mothers taking vitamin A forty-two days after delivery. Benchmark: 11% Target: 60% (KPC: BL, FE. LQAS: ME.) **Indicator #3:** Percentage of children 6-60 months of age receiving vitamin A supplementation in the previous six months. Benchmark: 40% Target: 80% (KPC: BL, FE. LQAS: ME.) **Indicator #4:** Percentage of households using iodized salt. Benchmark: 49%. Target: 70% (KPC, LQAS, ME, FE) **Indicator #5:** Children less than 60 months with diarrhea who are treated with ORT at home. Benchmark 52%; Target 65% (KPC: BL, FE. LQAS: ME.) **Indicator #6:** Percentage of mothers who know the signs of diarrhea needing treatment					
Major Activities	**Activity Focus**	**Time Frame**	**Personnel**	**Benchmarks/Targets**	**Status/Comment**
Household					
Promote utilization of iodized salt in households	BC	Starting January 2005	400 CHWs 600 Care Groups	CHWs conducting IEC/BCC activities regularly among the maternal care groups	
Promote exclusive breastfeeding	BC	Starting January 2005	400 CHWs 600 Care Groups		
Community					
Organize community demonstrations of proper weaning food preparation	BC	Starting September 2005	600 Care Groups	Monthly demonstrations by care groups held	
	A		600 Care Groups		
Assist women's groups in accessing micro-credit for nutritional activities		Starting September 2005	450 Women's Groups	Micro-credit is accessible for women's groups	
	A, Q, BC		District Health Teams		
Organize community level growth monitoring activities at pilot sites		Starting July 2004	20 CHWs 50 Women's Groups	Growth monitoring activities on monthly basis	
	A		400 CHWs		
Organize CBD of		Starting December 2004			

Objective#2: Improve case management of malaria at the community and health post levels.					
Indicator #1: Percentage of pregnant women with access to IPT. Benchmark: 2% Target: 60% (KPC: BL, FE. LQAS: ME) **Indicator #2**: Percentage of caregivers recognizing severe danger signs of malaria and seeking appropriate care within 24 hours. Benchmark: 48% Target: 60% (KPC: BL, FE. LQAS: ME) **Indicator #3:** Percentage use of ITNs among pregnant women. Benchmark: 18% Target: 50% (KPC: BL, FE. LQAS: ME.) **Indicator #4:** Percentage use of ITNs by children<2. Benchmark: 21% Target: 50% (KPC: BL, FE. LQAS: ME.)					
Major Activities	**Activity Focus**	**Time Frame**	**Personnel**	**Benchmarks/Targets**	**Status/Comment**
Household Make IEC/BCC home visits to mothers and caregivers	BC	Starting January 2005	400 CHWs	IEC/BCC activities carried out	
Community Create 40 units for sale and treatment of ITNs	A	January-April 2005	Africare Women's Groups Women's Federation	40 units for retreatment of bed nets created	
Procure an initial stock of 25,000 ITNs	A	April 2005	400 Communities 450 Women's Groups MOH	Initial stock of ITNs procured for CBD	
Establish 450 revolving funds for CBD of ITNs	A	April 2005-August 2005	Africare Women's Federation	450 revolving funds for CBD created and functioning	
Health Facility Supervise IEC/BCC activities	BC	Starting March 2005	27 Health Post nurses 1 Health Center		

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Major Activities	**Activity Focus**	**Time Frame**	**Personnel**	**Benchmarks/Targets**	**Status/Comment**
			nurse		

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Major Activities	**Activity Focus**	**Time Frame**	**Personnel**	**Benchmarks/Targets**	**Status/Comment**
District					
Train 12 trainers in malaria case management, danger signs and care-seeking	Q, BC	August 2004	District Health Teams	TOT session conducted	
Train 400 CHWs in malaria case management, danger signs and care-seeking	Q, BC	September 2004-September 2005	12 Trainers	400 CHWs trained in communication techniques for malaria	
Retrain 200 CHWs in malaria case management, danger signs, care seeking	Q, BC	January 2006-June 2006	12 Trainers	200 existing CHWs identified and trained in communication techniques for malaria	
Train 120 CHWs in ITN retreatment techniques	A	May 2005-July 2005	District Health Teams	120 CHWs trained in ITN retreatment techniques	
Organize an exchange workshop	BC	December 2004	Africare District Health Teams	120 TH targeted for workshop	

Objective#2: Improve case management of malaria at the community and health post levels.					
Indicator #1: Percentage of pregnant women with access to IPT. Benchmark: 2% Target: 60% (KPC: BL, FE. LQAS: ME) **Indicator #2**: Percentage of caregivers recognizing severe danger signs of malaria and seeking appropriate care within 24 hours. Benchmark: 48% Target: 60% (KPC: BL, FE. LQAS: ME) **Indicator #3:** Percentage use of ITNs among pregnant women. Benchmark: 18% Target: 50% (KPC: BL, FE. LQAS: ME.) **Indicator #4:** Percentage use of ITNs by children<2. Benchmark: 21% Target: 50% (KPC: BL, FE. LQAS: ME.)					
Major Activities	**Activity Focus**	**Time Frame**	**Personnel**	**Benchmarks/Targets**	**Status/Comment**
with 50 traditional healers					

Objective#3: Improve nutrition of women and children, including Vitamin A supplementation and exclusive breastfeeding. **Indicator #1**: Percentage of mothers practicing exclusive breastfeeding for six months. Benchmark: 24% Target: 60% (KPC: BL, FE. LQAS: ME.) **Indicator #2**: Percentage of mothers taking vitamin A forty-two days after delivery. Benchmark: 11% Target: 60% (KPC: BL, FE. LQAS: ME.) **Indicator #3:** Percentage of children 6-23 months of age receiving vitamin A supplementation in the previous six months. Benchmark: 40% Target: 80% (KPC: BL, FE. LQAS: ME.)					
District Advocate for change in protocol enabling CHWs to be trained in vaccination techniques Train CHWs in vaccination outreach	A, Q A	Starting August 2004 Starting August 2005	District Health Teams Africare District Health Teams 27 Health Post Nurses		
<u>Health Facility</u> Organize facility based growth monitoring activities in 27 facilities Supervise IEC/BCC and community growth monitoring activities	A Q	Starting July 2004 Starting March 2005	27 Health Post Nurses 27 Health Post Nurses	27 facilities regularly conducting growth monitoring activities	

Objective #4: Improve diarrhea recognition and management at community and household levels					
Indicator #1: % of mothers and caretakers who treat children 0-23 months with ORT during their last diarrhea episode. **Indicator #2**: % of mothers and caretakers with children 0-23 months who report handwashing with soap/ash before food preparation or child feeding, after use of latrine or cleaning child **Indicator #3:** % children 6-23 months who consumed same amount or more foods during their last episode of diarrhea\ **Indicator #4:** % of mothers and caretakers who know at least one danger sign of diarrhea that requires immediate treatment (check rapi catch indicator wording)					
Major Activities	**Activity Focus**	**Time Frame**	**Personnel**	**Benchmarks/Targets**	**Status/Comment**

Advocate for more Oral Rehydration Units located at the health facilities				Rehydration Units created	
Operations Research on use of zinc in treatment of diarrhea	Q	Starting in Spring 2005	Consultant	Operations Research Conducted and results shared with District Health Team	
Household BCC activities with emphasis on key behaviors related to the prevention of diarrheal disease	BC	Starting in January 2005	12 Trainers	Community members more informed on key behaviors and practicing them to prevent diarrhea	
Hygiene promotion to build on UNICEF water interventions	A, BC				
Community Training of 400 CHWs in hygiene promotion, diarrhea case recognition and management	A, Q	Starting in January 2005	12 trainers	CHWs trained	
Assist Care groups to acquire stocks of ORS for distribution		Starting January 2005	Africare		
Train/orient care group members in correct usage of ORS		As of January 2005	CHW		
Promote reactivation of village sanitation committees		From March 2005	Aficare/CHW	Sanitation committees active in target villages	
Community mobilization using drama to educate communities on diarrhea prevention	BC	Starting in January 2005			

Objective#5: Improve the capacity of local partners to plan, implement, monitor and evaluate child survival interventions at the community and district levels with an emphasis maternal and neo-natal health, malaria, nutrition, breastfeeding and diarrhea.					
Indicator #1: Partner has capacity to conduct CBO training **Indicator #2**: Partner has capacity to supervise and strengthen community-based activities. **Indicator #3**: Women's groups are planning and undertaking increased health and development initiatives.					
Major Activities	**Activity Focus**	**Time Frame**	**Personnel**	**Benchmarks/Targets**	**Status/Comment**
Household					
Community Training of women's groups in management of revolving fund creation and management Training in group dynamics, entrepreneurship and management	A Q	March 2005-March 2006 Starting February 2005	Africare Africare	Women's Groups Trained and revolving fund in place	
<u>Health Facility</u> Organize monthly meetings between the 27 Health Posts and the 400 CHWs	Q	Starting August 2004	District Health Teams Africare	Monthly meetings organized and held	

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Indicator #1: Partner has capacity to conduct CBO training **Indicator #2**: Partner has capacity to supervise and strengthen community-based activities. **Indicator #3**: Women's groups are planning and undertaking increased health and development initiatives.					
Major Activities	**Activity Focus**	**Time Frame**	**Personnel**	**Benchmarks/Targets**	**Status/Comment**
District Organize quarterly steering committee meetings	Q	Starting August 2004	District Health Teams Africare	Steering committee meetings organized/held	
Conduct monthly monitoring and evaluation	Q	Starting August 2004	District Health Teams 27 Health Post Nurses Africare		

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Africare

TAMBACOUNDA HEALTHY START PROGRAM (THSP)
'Starting Life in Good Health'

BASELINE SURVEY ON KNOWLEDGE, PRACTICE AND COVERAGE IN THE FIELD OF CHILD SURVIVAL

FINAL REPORT

Dr Issa WONE
Consultant

March 2004

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- All personnel of the health district of Tambacounda, in particular Dr. Sheik SECK and Mamadou Mokhtar NDIAYE.

This collaborative effort would not have been possible without the personal contribution of each person noted above.

We hope that our modest efforts can serve maternal and child survival efforts in this underprivileged part of Senegal.

ABBREVIATIONS

ARI	Acute Respiratory Infections
BCG	Bacillus of Calmette and Guérin
CHA	Community Health Agent
CSTS	Child Survival Technical Support
DHS	Demographic and Health Survey
DTCP	Diphtheria Tetanus whooping Coughs Poliomyelitis
FPO	Feminine Promotion organization
FIC	Fully Immunized Child
HBS	Home-Base Solution
HIV	Human Immunodeficiency Virus
ITN	Insecticides Treated Nets
IUD	Intra Uterine Device
KPC	Knowledge Practice and Coverage
MICS	Multiple Indicators Cluster Survey
ORS	Oral Re-hydration Salts
ORT	Oral Re-hydration Therapy
RDA	Regional Development Agency
SD	Standard Deviation
SP	Sulfadoxine-pyrimethamine
THSP	Tambacounda Healthy Start Program
TTV	Tetanus Toxoid Vaccine
WRA	Women of Reproductive Age

EIG	Espace telephone génésique

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SUMMARY

The health district of Tambacounda, located in the Eastern part of Senegal, occupies a surface of 20 328 kms2 for a population of 267 543 habitants. It is characterized by the low access to health services, geographic isolation, poverty and illiteracy. The present study was carried out to assess and evaluate the essential indicators in the field of maternal health and child survival before introduction of the Tambacounda Healthy Start Program (THSP). This study looked at a representative sample of 307 mothers or caretakers of children aged 0 to 23 months. The average age of those surveyed is 25 years ± 8 years. They are generally married (94%), Moslem women (97%) and have in 25% the cases, their own financial resources. Twenty two percent (22%) were never educated about the following key maternal and child health indicators:

Prenatal Care: 85% of the mothers had at least one antenatal visit during their pregnancy, but only 33% had all three. 78% of women took antimalarials during their pregnancy but only 63% had taken them throughout the entire pregnancy. Eighty percent of the mothers received iron supplementation during their pregnancy. The use of mosquito nets treated with insecticides (ITNs) remains a marginal practice of the pregnant woman (18%).

Conditions of and Skilled Attendance at birth: 50% of the women gave birth at home. The majority of births were attended by a member of the family (27%) or by a traditional birth attendant (12%). The infant is generally washed immediately after the birth. In only 18% of the cases was the infant placed immediately at the breast. Vitamin A supplementation after giving birth is rare (11%).

Birth Spacing: the desire for a pregnancy at a later time was present among 68% of the mothers surveyed. This wish is however expressed for a time at least equal to two years. Ten percent of the women use a modern contraceptive method.

Breastfeeding and Child Nutrition: The rate of exclusive breastfeeding is estimated at 24%. Thirty seven percent (37%) of the mothers know the advantages of the colostrum and 90% among these affirm that it was given to the newborn in the three days which followed the birth. Only 20% of the mothers breastfed their child within one hour following birth; other foods were introduced in 68% of the cases. The consumption of porridge increased depending on the age of the child and 45% of the 12-17 month old children consumed some porridge in the 24h before the survey. Iodized salt was present in only 49% of the households.

Growth Monitoring: Only 37% of the old children less 3 months benefit from monthly weighing. In only 13% of the cases did the child benefit from deworming. 13% of the children were experienced stunting, 20% were wasted and 22% had growth faulting. Neither the level education of the mother nor the occurrence of a recent diarrhea episode was correlated with the child's nutrition status.

Immunization: 78% of mothers had the child's immunization card. Immunization coverage by antigen is : 68% for BCG, 48% for the DTP3 and 49% for measles and yellow fever. 48% of the children were completely immunized.

Childhood Illnesses: 43% of the mothers were able to cite at least 2 signs of illness requiring treatment. The prevalence of diarrhoea is 45%, pneumonia (43%) and malaria (25%). ORS

was used by 52% of the mothers whose children had diarrhoea. Only 21% of the 0-23 month old children sleep under insecticide treated mosquito nets.
Knowledge of HIV/AIDS: 54% of the mothers know that HIV can be transmitted from mother to child. They think that this transmission occurs during childbirth.

The indicators generally show a low level of knowledge of the mothers on the child survival programs, except for the danger signs of malaria. Coverage is also very low, particularly for priority programs such as use of ITNs and Vitamin A supplementation

1. INTRODUCTION

1.1. Context

The health district of Tambacounda, located in the Eastern part of Senegal, has 267 543 inhabitants on a surface of 20 328 kms2. It includes 1 commune (Tambacounda) and 4 districts (Koussanar, Koupentoum, Maka and Missirah) and 12 rural communities. The population of the district is very scattered, especially concentrated in the urban zones and perished urban. Tambacounda is a primarily rural department. Eighty three percent (83%) of the population live in rural areas and 17% in urban areas. The majority of the population works in agriculture.
The region is considered poor, and it is estimated that nearly 40% of the households lives below the poverty line. In addition, the district is characterized by inadequate access to health care services. 72% of the population is illiterate. Key health indicators are as follows: high maternal mortality (720/100000 live births against 510/100000 live births at the national level); high fertility rates (7.1); and high infant and child mortality (181/1000 against 145/1000 at the national level). This situation is made worse due to a weak health infrastructure: 70% of the population lives more than 5 kilometers from a health facility and 30% more than 15 kilometers. The district of Tambacounda has 1 doctor for 133,771 inhabitants; 1 male nurse for 7869 inhabitants and one traditional birth attendant for 15 384 WRA. There are 104 health huts in the district, but actually very few of them are functional. Health indicators are amongst the lowest in the country. With such low health indicators, Africare decided to implement the "Tambacounda Healthy Start Program" (THSP). This project will utilize three strategies:
Community Mobilization: formation of community health workers, volunteers, matrons, traditional birth attendants; organization of community forums and advocacy geared towards community leaders;
Training and Capacity Building of Local Partners (local NGOs, CBOs, district health system
Equipping health huts and Procurement of Essential Materials and Products: Chloroquine, ITNs, birthing kits and management of the newborn
The project aims to:

- Increase to 80% the utilization of prenatal care services;
- Increase to 60% the number of pregnant women using IPT
- Increase to 60% the number of mothers/grandmothers who recognize the danger signs for malaria and seek treatment within 24 hours
- Increase by 40% use of ITNs among pregnant women and children of 0-5
- Increase by 30% the rate of exclusive breastfeeding
- Improve nutritional status of children less than 5 years by 30%.

- Improve by 30% access to and utilization of micronutrients, in particular of iron and vitamin A.

The present study constitutes the baseline evaluation before the introduction of THSP. The specific objectives are as follows:

- To evaluate in the zones targeted by the project the knowledge and practices of mothers in regards to: prenatal care, childbirth, newborn care, child spacing, food and nutrition of children, malaria, ARI/pneumonia, and diarrhea
- To evaluate the current immunization coverage in the zones targeted by the THSP.
- To evaluate the nutritional status of children 0-23 months old in the zones targeted by project THSP.
- To make recommendations intended to facilitate achievement of project objectives.

1.2. Local partners for implementation of KPC baseline survey

The baseline survey proceeded with the participation of the local partners. The core TEAM was made up of Africare staff, program manager and health program manager, consultant, adjunct medical officer, representative of ARD Tambacounda

2. Material and Methods

2.1 Design and revision of questionnaire

The questionnaire was designed from generic materials placed at the disposal of the public by Child Survival Technical Support (CSTS); organization specialized in the development of instruments of research and evaluation in the field of child survival financed by USAID. The questionnaire was developed keeping in mind the level of effort of each intervention, as indicated by Africare. The drafts proposed by the consultant were amended on several occasions before leading to a final version including: Thirteen (13) questions on knowledge, practices and coverage (KPC) in prenatal care; Sixteen (16) questions on childbirth, newborn care, and post partum care (including antenatal visits). Eight questions (8) on child spacing; Ten questions (10) on breast feeding and the nutrition of the child; Six (6) questions on the practices and coverage in the field of growth monitoring. Anthropometric measurements (weight, height) were conducted for the surveyed children; Thirteen (13) questions about immunization practices and coverage; Three (3) questions on knowledge and the frequency of childhood illnesses: diarrhea, ARI, malaria; Twelve (12) questions on diarrheal diseases; Seven (7) questions on ARI; Nineteen (19) questions on malaria. Four (4) questions testing knowledge on maternal transmission of HIV; and three (3) questions exploring the contacts and sources of information about health. The KPC survey was adapted according to the expected responses. Certain questions which could elicit numerous responses were clarified, and possibilities of answer brought back to "Yes/No"

2.2 Training of Core Team, supervisors and interviewers

A meeting of orientation of Core TEAM was held Monday March 8 at Africare's office in Tambacounda. The purpose of the meeting was to clarify the methodology for the interviewers, to present the survey instruments, to discuss the sampling methods and to specify the role of the core Team. Tuesday, March 9, was devoted to training of the supervisors. These individuals already had experience with these types of surveys. The training consisted of reviewing the survey instrument, followed by a review of anthropometric

measurements as well as how to test for iodized salt. Training of the investigators lasted three days distributed as follows:
Day 1: presentation of methodology, instruments; discussion on the role of the investigators and the supervisors; reading with accompanying notes and translation of the questionnaire.
Day 2: simulations. Simulations were done in the 4 principal common languages of the district: Wolof, Pulaar and Mandingue
Day 3: pre test. The pre test was held in the 2 districts of the commune of Tamba where no sample had been drawn: Lberté and Gourel Diadji. The pre test made it possible to identify certain difficulties: incomprehension on certain questions, need for a scale to weigh newborns, case of child mothers in the sampled households. The data-gathering proceeded in three days (March 13-15, 2004.

2.3 Sampling Methodology

N = estimated sample size
e = confidence interval 95% = 1.96
p = probability of event occurring; p will be fixed by default at 50%
Q = complementary probability =1-p = 50%
E = desired precision = 10% the size thus calculated is 96.

The sample was drawn from the entire district of Tambacounda: commune, villages and hamlets. From the list of the localities of the district provided by the chief consultant, thirty clusters were selected for the investigation. The first household was selected using a bottle or of a ball point pen. Choice of the 1st concession: it was recommended to the supervisors to choose the 13th concession on the selected bloc, 7th or the 3rd if there were less than 13. Once inside the concession, the youngest child within the ages of 0-23 months in each household was recruited. Young mothers were considered as pertaining to the household in which they lived, and their child was also recruited. Twins (the case arose once) were taken separately. For the recruitment of the following concessions, the investigators went to the nearest concession door.

2.4 Data Collection

The collection of data has been done from the 13th to the 15th of March, 2004 in the sampled localities. Teams left Africare/Tambacounda in the morning and came back in the evening around 9:00 pm. Africare and the health district contributed vehicles to the survey teams and 3 additional vehicles were rented. Every team (1 supervisor and two investigators on average) had a measuring stick, a Salter scale, and a small bottle of starch to test the iodine in the salt).No problems were uncovered during data collection.

2.5 Data Analysis

Data were analyzed using Epi Info 6. Diagrams and charts were done using Excel.

3 RESULTS

3.1 General Characteristics of respondents

In total, 307 women between the ages of 14 and 52 years, with an average age of 25 years ± 8 years, were surveyed. In 99% of the cases, it was the mother itself which was surveyed. The majority was Muslim (97%); only 3% were Christian. 43% were Halpulaar; 2% were Serer; and 2% were Diola (2%). This distribution is represented in figure 1. Ninety four percent

(94%) of the mothers surveyed were married, 4% were single, 1% of the widows, and 1% of the divorced women (figure 2). Only 30% of the women received education in the French language, and 22% never received any education. The distribution of the respondents according to the level of education is given in table I.

Figure 1: distibution of investigated them according to the ethnie

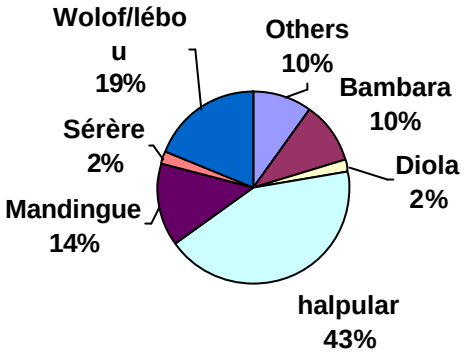


Figure 2: distribution of investigated them according to the matrimonial situation

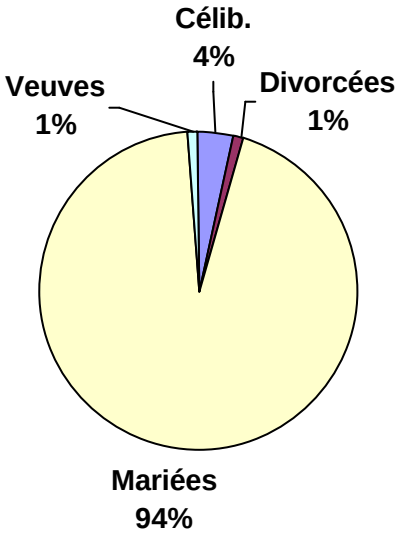


Table 1: distribution of mothers according to the level of education

Frequency instruction type	Frequency	% (n=303*)
None	66	22%
Primary	69	23%
Second. and more	21	7%
Koranic school	89	29%
Alphabetized in national languages	39	13%

Among the mothers, 22% had never received any education and only 30% among them received formal education. Seventy seven women, 25.1% of the sample, work outside of the house to increase their incomes. The type of work done follows in Table 2:

Table 2: distribution of activity type of those working outside the home

activity type	Frequency	of the whole (n=77)
Handicraft	1	1%
Harvests	12	16%
Sale of food	11	14%
Street commerce	36	47%
Domestic employee	7	9%
Salaried work	5	6%

We noted otherwise that in 39% of cases, the child remains permanently with his/her mother. In the other cases, it is the grandmother (25% of cases) that keeps the child in the mother's absence (Table 3).

Table 3: distribution of the identity of child's guardian

Identity of the guardian	Strength	Frequency (%)
Child. Remain with his/her mother	119	39%
Aunt	17	6%
Older sibling	41	13%
Grandmother	76	25%
Neighbor	19	6%
Other	55	18%

2.1 Maternal and Newborn Health

2.1.1 Antenatal care

Antenatal Care
Ninety five percent (261/307) of women had at least one antenatal visit during their last pregnancy; 15% (46/307) did not.

Table 4: rate of utilization of ANC

	Frequency	%
Yes	261	85
No	46	15
TOTAL	307	100

Only 33% of those who benefited from antenatal care services did so three times.

Table 5: Percentage of mothers having had at least three prenatal visits at the time of their pregnancy

	Frequency	%
Yes	101	33
No	56	18
TOTAL	307	100

Vitamin A Supplementation
Eighty one percent (81%) of the women (247/307) received at least 1 dose of VAT whereas 18% did not receive any amount.

Table 6: frequency of vitamin A supplementation among pregnant women

	Frequency	%
Yes	247	81
No	56	18
TOTAL	307	100

Possession of a health card
Only 45% of the women possessed a health card from their last pregnancy. Sixteen percent never had a health card.

Table 7: possession of a health card

	Frequency	%
Yes	136	45
No	120	39
Ever had a health card	51	16
TOTAL	307	100

Malaria Prophylaxis during Pregnancy

More than seventy eight percent (242/307) of women took a malaria prophylaxis during their last pregnancy.

Table 8: mothers having taken chloroquine or another antimalarial drug during their last pregnancy

	Frequency	%
Yes	242	78,9
No	65	21,1
TOTAL	307	100

The antimalarial taken was most often chloroquine (96% of cases). Notice that Sulfadoxine Pyriméthamine (Fansidar) was used in only 2% of cases.

Table 9: type of antimalarials taken

	Frequency	%
Chloroquine	233	96
Sulfadoxine pyriméthamine	5	2
Pyriméthamine	4	2
TOTAL	242	100

Among the 242 women having declared to have used antimalarials during their last pregnancy, only 153 (63%) took it for the duration of their pregnancy.

Table 10: Duration of antimalarial use

	Frequency	%
All the pregnancy	153	63
A part of pregnancy	89	37
TOTAL	242	100

Utilization of ITN during pregnancy

Only 18% (55/307) women slept under an ITN the previous night. The utilization of ITNs remains low among pregnant women.

Table 11: mothers having slept under ITN the night before

	Frequency	%
Yes	55	18
No	252	82
TOTAL	307	100

Iron Supplementation

80% of mothers affirm having received iron supplementation during their last pregnancy.

Table 12: mothers having received supplementation in iron during their last pregnancy

Iron supplementation	Frequency	%

Yes	245	80
No	62	20
TOTAL	307	100

Vitamin A Supplementation
Only 11% of mothers received Vitamin A in the 42 days that followed their childbirth.

Table 13: mothers having received Vitamin A in the 42 days following childbirth

Vitamin A Supplementation	Frequency	%
Yes	34	11
No	265	86
Doesn't know	8	3
TOTAL	307	100

2.1.2 Conditions of and attendance at birth

Place of the childbirth
More of half (51.5%) of the women gave birth at home; 19% at a health facility.

Table 14: places of childbirth

Places of Birth	Frequency	%
Domicile	154	50
Other domicile	4	1
Hospital	33	11
Private clinic	3	1
Health Center / ONG	61	19
Health post	48	16
Other	4	1
TOTAL	307	100

Skilled Attendance at Birth
Among the 304 mothers, 139 (45.7%) declared that their childbirth was attended by a skilled person (physician, and midwife, or nurse); we also noted that 27% of women have been attended by a member of their family and 12% with the help of a traditional birth attendant (see table 15).

Table 15: Skilled attendance at birth

	Frequency	%
Physician	10	3
Nurse / midwife	129	42
Traditional midwife	36	12
ASC	17	5
Family member	83	27
Other	28	9

Instrument used to cut the umbilical cord

In 57% (144/253) of cases, women declared that the umbilical cord was cut with a new razor blade

Table 16: Instrument used to cut the cord

	Frequency	%
New razor blade	144	57
Other instrument	87	34
Doesn't know	22	9
TOTAL	253	100

Place where the newborn has immediately been placed after the childbirth
The child was immediately placed close to the mother after the birth in only 16% (49/307) of cases.

Table 17: place where the new been born has immediately been placed after birth

	Frequency	%
With the mother	49	16
In the cradle	41	14
On the floor	35	12
Washed	132	44
Doesn't know	16	4
Other	34	10

Survey of practices at time of birth
The newborn was not put to the breast immediately after the childbirth in 18% of cases (56/307).

Table 18: Convenient dispensed to the new been born to the birth

	Frequency	%
Child put to the breast	56	18
Child washed	118	38
Let to sleep	116	38
Doesn't know	8	3
Other	9	3
Total	307	100

Exam of the mother after childbirth
The majority of women were examined the same day of their childbirth (73%). Children were most often examined at this opportunity (85%).

Table 19: exam after birth

Exam of the mother	Frequency	%
Yes	128	42
No	176	58
TOTAL	304	100

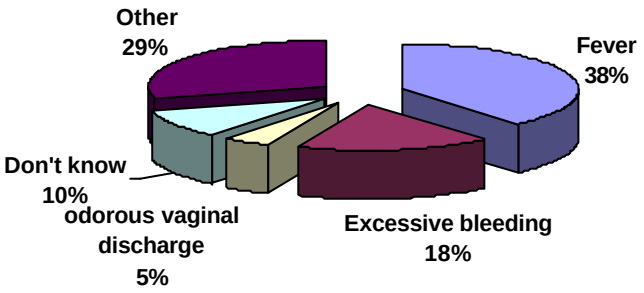
The person conducting the examination is distributed in Table 20.

Table 20: identity of person who conducted the woman's exam after the childbirth

	Frequency	%
Physician	8	6
nurse/midwife	93	74
Matron	21	16
Traditional midwife	4	3
Total	126	100

Among the 126 mothers for whom an exam had been conducted, we noted that in 80% of cases it was done by qualified personnel.

Knowledge of danger signs after childbirth requiring recourse to a health facility



2.1.1 Child Spacing

Six percent (19/307) of women were pregnant at the time of the survey.

Table 21: frequency of current pregnancy among mothers

	Frequency	%
Yes	19	6
No	284	92,5
Not sure	4	1,5
TOTAL	307	100

However, 68% had the desire to become pregnant at the time of the survey.

Table 22: desire of pregnancy

Desire of a new pregnancy	Frequency	%
Yes	196	68
No	72	25
Doesn't know	20	7
TOTAL	288	100

The delay wished for a new pregnancy is greater than 2 years for 76% of the 196 women wanting a new pregnancy.

Table 23: Delay wished for the next pregnancy

	Frequency	%
During the next two years	28	1
In more than two years	150	76
Not sure	19	10
TOTAL	197	100

Birth interval

The interval between the 1st and 2nd child was on average 30 months ±12 months (n=122)

Table 24: percentage of children of 0-23 months of which the delay between the birth and the one of the previous living child is superior or equal to 24 months.

	Frequency	%
Greater than two years	80	66
Less than 2 years	42	34
TOTAL	122	100

Contraception

10% of women use a modern contraceptive method: the most common are injections (4%), followed by the pill and Norplant.

The natural "methods" (exclusive breastfeeding/LAM, rhythm, abstinence) represent 11% of the contraceptive practice. 79% of women do not use any contraceptive method.

Table 25: frequency of the present contraception at mothers

	Frequency	**%**
No contraception	238	79%
Breastfeeding/amenorrhea	24	8%
Injections	11	4%
Norplant	5	2%
Pill	5	2%
IUD	1	0%
Condom	3	1%
Mousse	3	1%

Rhythm		1		0%
Abstinence		9		3%
Other	3		1%	
TOTAL		**303**		**100%**

2.1.2 Breastfeeding and nutrition of the child

Knowledge of advantages of the colostrum

Only 37% (114/307) of mothers/caretakers know the protective effect of the colostrum on the child.

Table 26: knowledge of advantages of the colostrum (% mothers having mentioned the child's protection)

	Frequency	%
Yes	114	37
No	193	63
TOTAL	307	100

Time of initial breastfeeding

Only 20% of mothers breastfed their child within the 1st hour that followed childbirth

Table 27: % mothers having nursed their child in the 1st hour that followed the childbirth

	Frequency	%
Yes	53	20
No	207	80
TOTAL	260	100

Consumption of the colostrum in the first 3 days of life

Ninety percent (90%) of children benefited from the colostrum in the 3 days that followed the birth.

Table 28: consumption of colostrum (% children having consumed the colostrum in the 3 days that followed the childbirth

	Frequency	%
Yes	235	90
No	27	10
TOTAL	262	100

Exclusive Breastfeeding

The rate of exclusive breastfeeding here represented as the percentage of children less than 6 months of age who are breastfed, and not those who have received any other foods in the 24 hours that preceded the survey. So, among the 80 aged children of less than 6 months, 24% are exclusively breastfed.

Table 29: rate of exclusive Breastfeeding for children of less than 6 months

	Frequency	%
Yes	19	24
No	61	76
TOTAL	80	100

Table 30: Other food introduction besides maternal milk after childbirth

	Frequency	%
Yes	174	68
No	83	32
TOTAL	80	100

Table 31: Other food frequency besides maternal milk after childbirth

	Frequency	%
Other Milk	41	23
Water	80	44
Blessed Water	125	69
Other	31	17

Let's notice that the practice of the "toxxantal" (blessed water), was used in 69% of cases

Consumption of porridge

A third of children (33%) consumed porridge within the 24 hours that preceded the survey. We note an increase in consumption of porridge with increasing age of the child ($p < 0.01$ (table 32)).

Table 32: frequency of consumption of porridge according to age (child having consumed the porridge in the last 24h):

Age	Frequency	%
0-5 months	15 (15)	98
6-8 months	13 (33)	39
9-11 months	18 (43)	42
12-17 months	36 (45)	80
18-23 months	17 (40)	42
TOTAL	99 (33)	301

Consumption of iodized salt

49% (151/307) of households consume iodized salt.

Table 33: presence of iodine in salt consumed by households

	Frequency	%
Yes	151	49
No	156	51
TOTAL	307	100

Vitamin A Supplementation
40% of the children 6 months of age or more received Vitamin A

Table 34: Vitamin A Supplementation

	Frequency	%
Yes	82	49
No	122	51
Don't know	3	1
TOTAL	307	100

2.2 Growth Monitoring
2.2.1 Availability of a growth chart

Only 73% of children investigated possess an available document on which growth data is charted.

Table 35: Availability of a growth chart

	Frequency	%
Yes	225	73
No	82	271
TOTAL	307	100

3.3.2 Weighing
Of children greater than three months of age, only 37% have been weighed every month in the last 3 months.

Table 36: regularity of weighing (children older than 3 months having been weighed every month during the last quarter)

	Frequency	%
Yes	67	37
No	114	63
TOTAL	181	100

2.2.2 De-worming
Only13% of children had been de-wormed.

Table 37: children more than 6 months old having taken one medicine against worms in the last 6 months

	Frequency	%

Yes	27	49
No	163	51
Don't know	13	7
TOTAL	203	100

3.3.4 Rates of malnutrition following weight for height (Stunting)

Rates of malnutrition have been appraised here using weight for height and evidence of severe malnutrition. This one is expressed in standard deviation or "Z-score "in relation to an average of reference on a population within which the studied variables (here the weight and age) are supposed to have a normal distribution.

13% of the children of 0-23 months were stunted in zones targeted by the THSP.

Table 38: frequency of stunting

	Severe stunting (<-3 ET)		**Moderate stunting (-3<M<-2 ET)**		**Normal Children > -2 ET**		**FREQUENCY /CLASSES OF AGE**
	FA	**%**	**FA**	**%**	**FA**	**%**	
0-5 months	0	*0*	4	*4*	89	*96*	93
6-8 months	0	*0*	4	*10*	35	*90*	39
9-11 months	0	*0*	6	*14*	36	*86*	42
12-17 months	1	*1*	11	*14*	68	*85*	80
18-23 months	2	*5*	10	*23*	31	*72*	43
TOTAL/average	**3**	***1***	**35**	***12***	**259**	***87***	**297**

3.3.5 Rates of malnutrition using weight for age

Table 39: frequency of wasting

	Severe wasting (<-3 ET)		**Moderate wasting (-3<M<-2 ET)**		**Normal Children > -2 ET**		**FREQUENCY/ CLASSES OF AGE**
	FA	%	FA	%	FA	%	
0-5 months	2	*2*	3	*3*	88	*95*	93
6-8 months	0	*0*	2	*5*	37	*95*	39
9-11 months	2	*5*	13	*31*	27	*64*	42
12-17 months	3	*4*	18	*22*	59	*74*	80
18-23 months	4	*9*	12	*28*	27	*63*	43
TOTAL/average	**11**	***4***	**48**	***16***	**238**	***80***	**297**

The global rate of malnutrition (severe and moderate) using weight for age is 20% in our sample.

3.3.6 Rates of malnutrition following height for age indicator

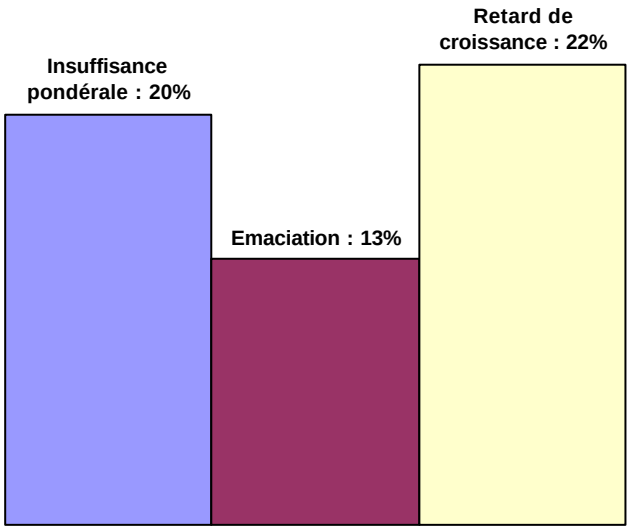
Table 40: Rate of growth faltering according to age

	Severe growth faltering **(<-3 ET)**		Moderate growth faltering **(-3<M<-2 ET)**		Normal Children **> -2 ET**		**FREQUENCY/ CLASSES OF AGE**
	FA	%	FA	%	FA	%	
0-5 months	6	*6*	6	*6*	81	*88*	93
6-8 months	2	*5*	5	*13*	32	*82*	39
9-11 months	6	*14*	8	*19*	28	*67*	42
12-17 months	8	*10*	11	*14*	61	*76*	80
18-23 months	6	*14*	8	*19*	29	*67*	43
TOTAL/average	**28**	***9***	**38**	***13***	**231**	***78***	**297**

22% of children had low height for age.

Global 3.3.7 Malnutrition Prevalence

Figure 4: prévalence de la malnutrition



3.3.8 Malnutrition and level of education of the mother

Table 41: frequency of malnutrition (low weight for age) according to the level of education of the mother

	Severe Malnutrition		Moderate Malnutrition		Normal Children		TOTAL
	FA	%	FA	%	FA	%	

Illiterate	1	*2*	7	*11*	54	*87*	62
Primary	1	*2*	7	*13*	47	*85*	55
Second. /sup.	0	*0*	1	*6*	15	*94*	16
Koranic school	2	*3*	14	*19*	57	*78*	73
Alphab.LN.	2	*5*	9	*24*	27	*71*	38
Other	0	*0*	0	*0*	1	*100*	1
TOTAL/average	6	*2*	38	*16*	201	*82*	245

One sees a rate of malnutrition of 15% among illiterate mothers and 24% for children with mothers who had received any education. However, this observed difference is not significant.

3.3.8 Malnutrition and diarrhea

There is not a meaningful difference in malnutrition rates among children who had a diarrhea episode in the last 2 weeks and those who did not (p = 0.93)

Table 42: frequency of the malnutrition (weight for age) correlated with diarrhea episode in the last 2 weeks

	Severe Malnutrition		Moderate Malnutrition		Normal Children		TOTAL
Occurred diarrhea	FA	*%*	FA	*%*	FA	*%*	
Yes	5	*4*	23	*17*	107	*79*	135
No	6	*4*	25	*15*	131	*81*	162
TOTAL/average	11	*4*	48	*16*	238	*80*	297

3.4 Immunization

3.4.1 Availability of an immunization card

Table 43: availability of immunization card

	Frequency	%
Yes	239	78
No	66	22
TOTAL	305	100

An immunization card was available in 78% of cases.

Table 44: available and seen immunization card

	Frequency	%
Yes	220	92
No	19	8
TOTAL	239	100

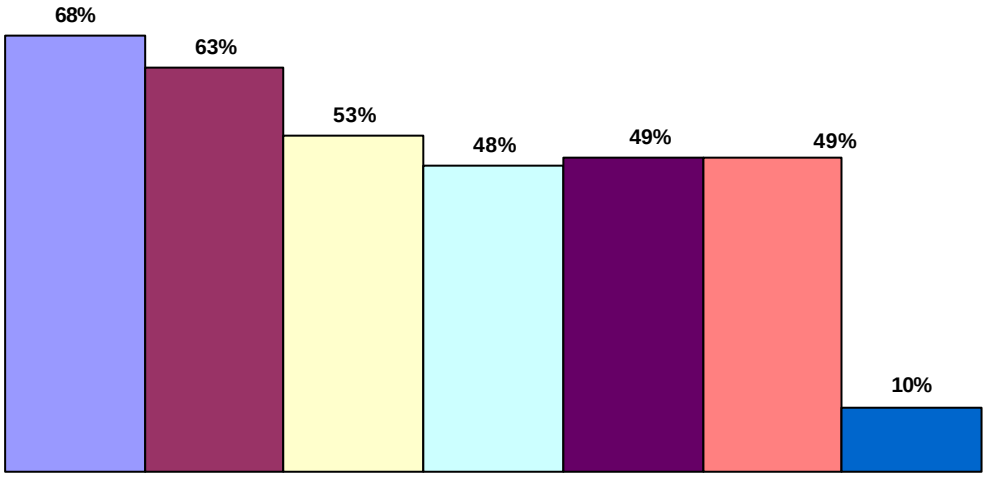
When the immunization card was declared available, it was only seen in 92% of cases.

3.4.2 Immunization Coverage by Antigen and Vitamin A

Table 45: coverage by antigen and vitamin A

	Strengths		**Coverage(%)**
	Vaccinated	**N**	
BCG	209	*307*	**68%**
DTCP 1	190	*301*	**63%**
DTCP 2	154	*293*	**53%**
DTCP 3	132	*276*	**48%**
Measles	82	*167*	**49%**
Yellow fever	82	*167*	**49%**
Vitamin A	21	*207*	**10%**

figure 5 : Immunication coverage by Antigen and in Vit. A



3.4.3 Children 11 months or older completely vaccinated

48 percent of children were completely vaccinated.

Table 46: Children of 11 months or older having received BCG, DTCP3, anti amaril (measles) and yellow fever vaccines

	Frequency	%
Yes	69	48
No	27	52
TOTAL	144	100

3.5 Childhood Illnesses

3.5.1 Care Seeking

Table 47: Frequency of caretakers mentioning at least 2 signs that require a treatment at health facility

	Frequency	%
Yes	132	43
No	172	57
TOTAL	304	100

Danger signs mentioned included apathy, general ill health, respiratory distress, vomiting, fever, the anorexia, or convulsions.

3.5.2 Frequency of childhood illness

Sign/Illness	Frequency	%
Diarrhea	137	45
Blood in stools	7	2
Cough/difficulty breathing	159	26
Fever/malaria	151	25
Convulsions	1	0

Diarrhea was the most common illness noted in the 2 weeks preceding the survey (45%).

3.6 knowledge and practices in case of diarrhea

3.6.1 Knowledge of causes of diarrhea

Table 48: mothers mentioning at least one cause of diarrhea

	Frequency	%
Yes	146	48
No	158	52
TOTAL	304	100

Only 48% of mothers mentioned at least one cause of diarrhea: consumption of dirty food or water and lack of hygiene.

3.6.2 Practices in case of diarrhea

Table 49: Use of ORS (children of 0-23 months having presented with diarrhea and having received ORS)

	Frequency	%
Yes	68	52
No	62	48
TOTAL	130	100

ORS was used in 52% of cases when the child presented with diarrhea.

Table 50: Breastfeeding and diarrhea

	Frequency	%
Breastfed less than usual	31	24
Breastfed as usual	79	59
Breastfed more than usual	16	12
Child did not breastfeed	4	5
TOTAL	130	100

In general, mothers continued breastfeeding even in the case of diarrhea. However, 24% of children were breastfed less than usual during their last episode.

Table 51: Drink and diarrhea (attitudes during the child's diarrheal episode)

	Frequency	%
Drank less than usual	14	11
Drank as usual	72	55
Drank more than usual	42	33
Child did not drink anything	2	1
TOTAL	130	100

In general, mothers continued giving drinks to the child in the same quantities as before the sickness. Only 33% of mothers stated that they give their child more liquids than usual.

Table 52: Feeding and diarrhea (attitudes during the child's diarrheal episode

	Frequency	%
Ate less than usual	25	19
Ate as usual	69	53
Ate more than usual	10	8
Child did not eat anything	26	20
TOTAL	130	100

One notes that 53% of mothers gave the same quantity of foods to their child in the case of diarrhea. In 20% of cases, the child didn't eat anything when he presented a diarrhea.

Table 53: Seeking advices and treatments in case of diarrhea

	Frequency	%
Yes	41	31
No	89	69
TOTAL	130	100

Only 31% of caretakers sought advice or treatment outside the home.

Figure 6: Recourse in case of diarrhea (n=42)

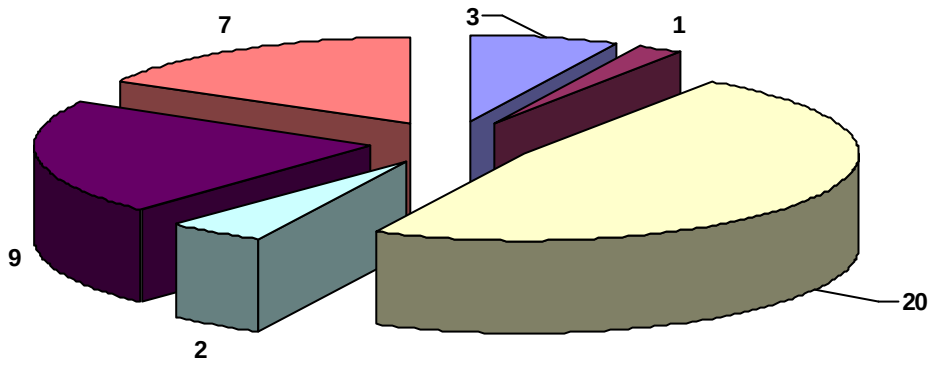


Figure 7: Person making the decision of care seeking in case of diarrhea (n=40)

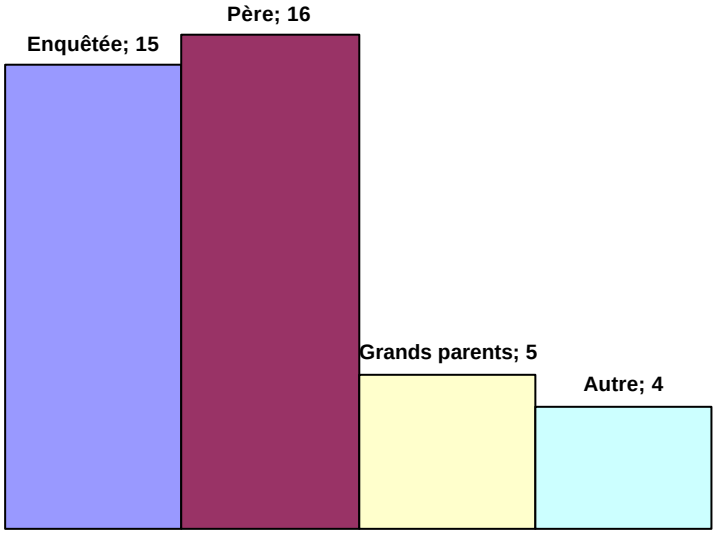


Figure 8: place of 2nd recourse in case of diarrhea

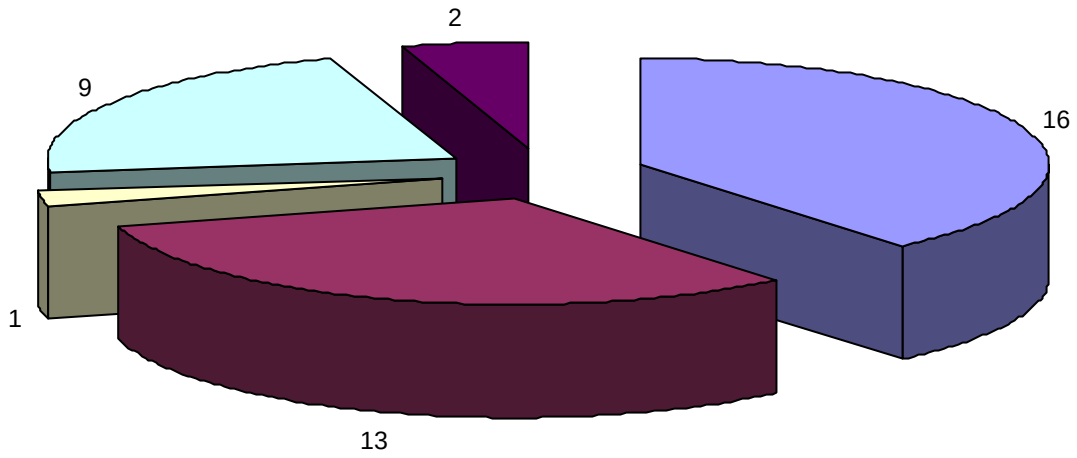


Table 54: knowledge of danger signs of diarrhea

	Yes (%)	n
Blood in stools	86(28)	304
Vomiting	79(26)	304
Fever	111(36)	304
Refusal to Eat	84(28)	304
Constant thirst	32(10)	304
Not better after three days of treatment	54(18)	304
Other	62 (20)	304

The fever constitutes the principal danger sign of diarrhea cited by mothers (35%). The presence of blood in stools (28%), the refusal to eat (28%) and vomiting (26%) were also cited.

3.4 knowledge and practice in case of ARI

3.4.1 Care seeking for ARI

Table 55: frequency of ARI

	Frequency	%
Yes	131	43
No	173	57
TOTAL	304	100

Forty three percent of children presented signs of ARI (cough, difficult breathing) in the two weeks preceding the survey.

Table 56: Children whose mother sought care or advice at the time of an ARI episode

	Frequency	%
Yes	63	48
No	68	52
TOTAL	131	100

Forty eight percent of mothers sought care for ARI.

Table 57: delay in care seeking in case of ARI

	Frequency	%
Same day	20	32
Following Day	19	31
After 2 days	11	16
After 3 days or more	13	21
TOTAL	63	100

Only 32% of mothers sought care within 24 hours after signs occurred.

Table 58: Knowledge of danger signs for ARI

	Yes (%)	**n**
Persistence after 2 days of treatment	139 (46)	305
Difficult or fast breathing	118 (39)	305
Inability to drink or eat	48 (16)	305
Convulsions	19 (6)	305
Fever	132 (43)	305
Other	42 (14)	305

Figure 8: First place where child with ARI was taken (n=62)

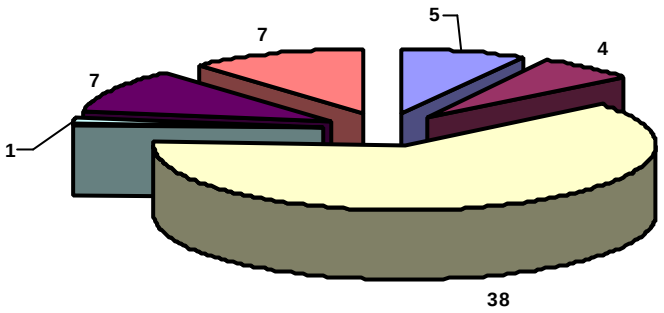
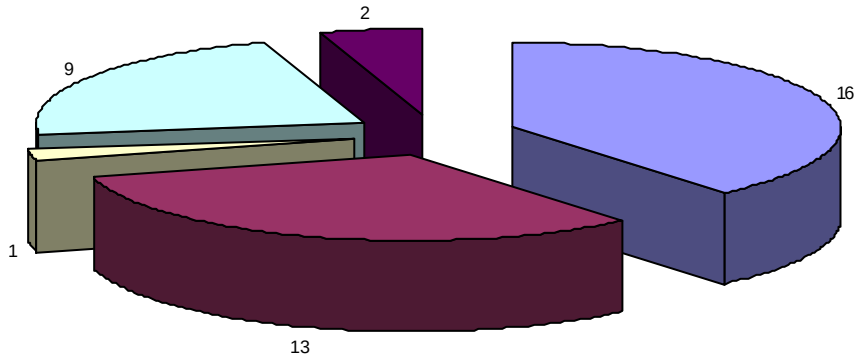


Table 59: Mothers seeking other care after seeing one of the above

	Frequency	%
Yes	22	35
No	40	65
TOTAL	62	100

In 35% of the cases, mothers sought a second opinion.

Figure 9: Second place where mothers sought care for ARI (n=22)



3.8 knowledge and practices for malaria

Table 60: mothers knowing the cause of malaria

	Frequency	%

Yes	219	72
No	85	28
TOTAL	304	100

72% knew that malaria was caused by mosquitoes.

Table 61: mothers knowing a means of preventing malaria

	Frequency	%
Yes	184	60
No	120	40
TOTAL	304	100

Sixty percent of mothers mentioned a means of prevention of the malaria: utilization of ITNs, hygiene/clean environment, insecticides.

Table 62: mothers knowing at least a sign of gravity of malaria

	Frequency	%
Yes	275	90
No	29	10
TOTAL	304	100

Ninety percent of mothers know at least one danger sign for malaria: fever persisting beyond 3 days of treatment, vomiting, inability to either eat or drink, convulsions, dark urine.

Table 63: care seeking for fever (children of 0-23 months having presented a fever at the health facility benefiting from care or advice)

	Frequency	%
Yes	52	48
No	56	52
TOTAL	108	100

48% of children having presented with a fever benefited from care or advice.

Table 64: Possession of ITN

	Frequency	%
Yes	152	51
No	150	49
TOTAL	302	100

51% of households possess an ITN.

Table 65: Children having slept under an ITN the previous night

	Frequency	%
Yes	64	21
No	238	79
TOTAL	302	100

Twenty one percent of children sleep under ITN.

1. 9 knowledge on VIH/SIDA

Table 66: knowledge by mothers of mother to child transmission of HIV

	Frequency	%
Yes	158	54
No	135	46
TOTAL	293	100

Only 54% of the mothers knew that HIV can be transmitted from mother to child.

Table 67: Knowledge of mothers on the maternal transmission method of HIV

	Yes (%)	**No (%)**
Virus transmits itself during pregnancy	121 (77)	37 (23)
Virus transmits itself during childbirth	63 (40)	95 (60)
Virus transmits itself after childbirth	60 (38)	98 (62)

Seventy seven percent of mothers knew that HIV is transmitted from mother to child affirm that this transmission occurs during pregnancy.

Table 68: opinion of mothers on possibilities to avoid the transmission of HIV to the child

	Frequency	**(%)**
Yes	59	38
No	56	37
NSP	39	25
TOTAL	151	100

Tent eight for hundred of mothers thinks that the transmission of AIDS by a seropositive mother can be avoided. Thirty seven for hundred think that the opposite. Twenty five for hundred of women confess to not know.

Table 69: opinion of mothers on possibilities of recovery from AIDS

	Frequency	**(%)**
Yes	13	8
No	108	63
Don’t know	50	29

TOTAL	171	100

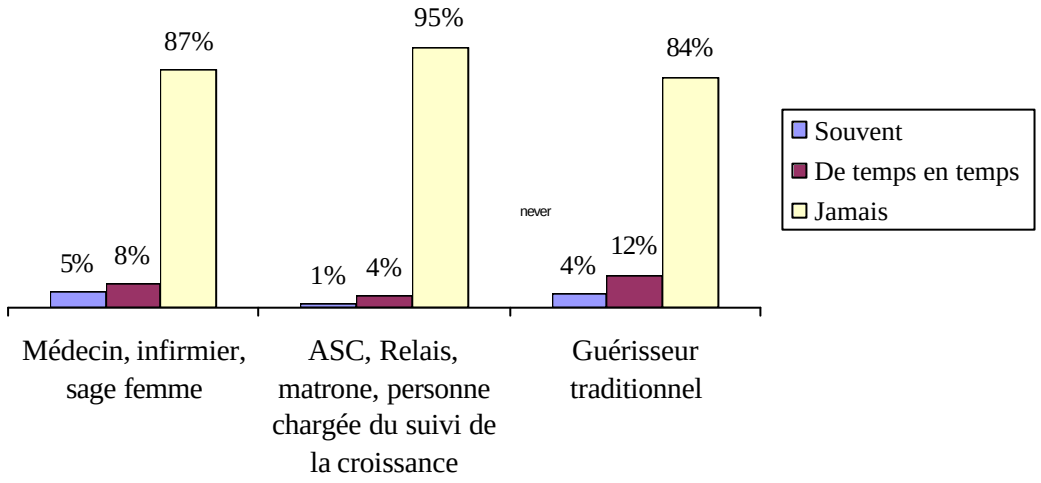
Sixty three percent of mothers think that one can be healed from AIDS and 29% among confess to not know.

3.10 contacts and sources of information concerning health

Table 70: contact with a resource person concerning health

	Often (%)	from time to time (%)	Ever (%)	TOTAL
Physician, nurse, midwife	30 (5)	46 (8)	491 (87)	567(100)
ASC, matron, person monitoring child growth	12 (1)	40 (4)	1015 (95)	1067 (100)
Traditional healer	12 (4)	31 (12)	226 (84)	269 (100)

Figure 10: Frequency of contact with resource persons regarding health information in the previous month



We note that 16% of people interviewed affirmed to have had a contact "from time to time" (1-3 times) or "often" (at least 4 times) with healers. This rate is 5% with the communal beneficiaries (ASC, matrons, loaded people of the surveillance of the growth) and of 13% for the official health personnel (physician, male nurse, wise man woman).

Table 71: sources of health information

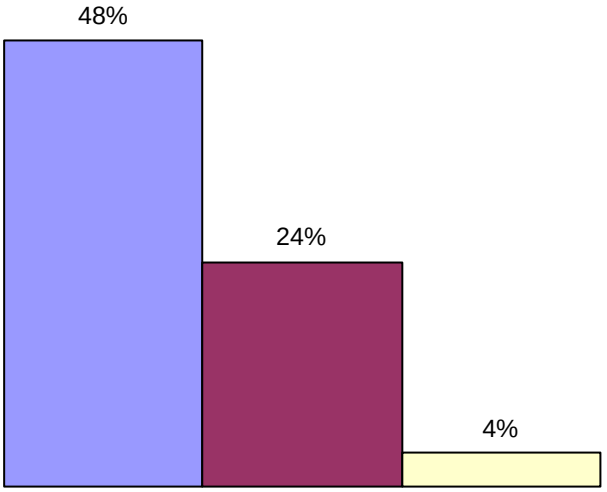
Source of information	Yes (%)	Total
*Physician, nurse, midwife	90 (15)	613
*ASC, matron, person monitoring child growth	1228	55 (4)
*Traditional healer	30 (10)	307
*Relatives (spouse/partner, mother in law, sister, Grandparents, aunt, friends, neighbors, elders)	187 (8)	2453

The main information source concerning health is the official health personnel. Physicians, nurses and midwives represent 15% of sources indeed. Then, come healers (10%) and relatives (8%). The community health actors (ASC, educators, matrons, and person monitoring child growth …) seem not to play more than a very marginal role in the diffusion of information concerning health.

Table 72: Health information through the Medias

	Frequency	**%**
Radio	147	48
Television	74	24
Newspapers	111	4

Figure 11: Source of Information



Let's notice that the radio constitutes the main media information source concerning health.

4. DISCUSSION

Low levels of literacy, widely dispersed population, and geographic isolation characterize the department of Tambacounda, among the poorer and underprivileged of Senegal.

This survey assessed essential indicators for maternal health and child survival.

Antenatal care

Utilization of antenatal care services was high (96%). The investigation MICS II revealed in 2000 a rate of utilization of antenatal care services by qualified personnel was 66.6%. This is contrasted, however, by weak rates of completion of all three visits during the course of pregnancy (33%). It may indicate the existence of bottlenecks presumably to two levels:
- Access to services.
- Quality of the service.

Despite this, antimalarials use during pregnancy is relatively high (78%). The use of sulfadoxine pyriméthamine, recommended currently by the national program for the fight against malaria (PNLP) for pregnant women, has not yet been adopted by the district of Tambacounda (2% of women exercise it). Only 37% of women benefited from IPT during pregnancy. Utilization of ITNs was low at 18%. 80% of women benefited from iron supplementation during their pregnancy.

Conditions of and skilled attendance at birth

The rate of childbirth in the home is high at 50%, whereas, paradoxically, only 16% of women deliver stations of health, which was revealed to be the 1st place for health concerns in rural areas. It could be because of geographic isolation, which makes access to the health posts more difficult. This high rate is an indication of lack of information and education of women, but also the weakness of the district's health infrastructure.

However, in 42% of cases, childbirth was attended by a midwife or a nurse; in 27% of cases by family members, and by a traditional midwife in 12% of cases. Let's note that the MICS investigation revealed that skilled attendance at birth (physician, nurse, and midwife) was 26.1%.
The practice of placing the infant to the breast, immediately after birth, was low. Only 16% of children were placed next to their mother and 18% were breastfed. The contraindicated practice of washing the infant immediately after birth was done in 38% of the cases.
The newborn was not examined after the birth in 42% of cases. This exam was carried out most of the time by a nurse or a midwife, and, more rarely, by a physician.

Child Spacing
The desire of a new pregnancy was raised with mothers of children aged 0 to 23 months, in which 36% stated that they wanted another child within a period less than 2 years. However, 6% of mothers were already pregnant at the time of the survey. This phenomenon, called in wolof "nef" (close pregnancies), causes physiological weakening of the mother and malnourished children.
Only 10% of women use a modern contraceptive method. This rate has increased consistently from only 3% in 1993 and of 4.6% in 2000.

Breastfeeding and nutrition of the child
Advantages of the colostrum are little known (37%), but 90% of mothers stated that they had given it to their children in the 3 days following childbirth. With regard to length of time it took to place the infant at the breast, only 20% of women breastfed their child in the hour that followed childbirth.
The rate of exclusive breastfeeding of children less than 6 months is also low (24%). It is however comparable to the national average that was 23.5% in 2000 [MICS, 2000].
Contrary to recommended feeding practices for the newborn, the introduction of other foods after birth is frequent (68%). The practice of giving the child "toxxantal" or blessed water was extremely prevalent (69%).
Paradoxically, 15% of children less than 6 months of age consume porridge. The consumption of porridge increases significantly with the child's age. The type of porridge mush clear soup according to age would reveal knowledge and convenient of mothers with regard to the ablactating and the severance.
Iodized salt was present in only 49% of the households. This was slightly less than what was found in 2000 (53.6%).

Surveillance of growth and malnutrition
Children aged 3 months or older that were regularly weighed constitute 37% of our sample. The use of deworming medication was very low (13%).
Malnutrition has been appreciated in our survey according to three classic indications:
-The rates of malnutrition following weight for height measuring stunting
-The rates of malnutrition using weight for age measuring wasting
-The rates of malnutrition using height for age measuring growth faltering
Severe stunting affected 13% of children versus 11.5% in 2000 [MICS II], wasting affected 20% against 23.8% in 2000 and growth faltering 22% against 24% in 2000.
The prevalence of malnutrition doesn't seem to have progressed substantially in 4 years.
The prevalence of malnutrition in the sanitary district of Tambacounda remains however appreciably higher than the national average in 2000 of 8.3% for stunting, 18.4% for wasting and 19% for growth faltering.

Immunization and Vitamin A Supplementation
78% of those interviewed had an immunization card; only 48% of the children were fully immunized (having received BCG, DPT3, measles and anti-amarils, based on verified card data).
Vitamin A coverage was approximately 10% in the last 6 months for children 6 months and older. This rate was 74.9 in 2000 in the Tambacounda region. This significant decline addresses the issue of upholding the achievements of appropriate supplementation programs.

Childhood Illnesses
Forty three percent of mothers mentioned at least 2 signs requiring recourse to treatment. In terms of comparison, this rate is at 71% in the sanitary district of Bambey, located in the center of Senegal.

Diarrhea
The incidence of diarrhea is at 45% for children 0 to 23 months. The transmissible character of diarrhea (food or soiled water, absence of hygiene) is fairly known by mothers (48%). It is at 66% in the same population in Bambey, and was at 35% for children of 0-5 years in 2000 in the region of Tambacounda. The difference observed between Bambey and Tambacounda is certainly owed to environmental and climatic disparities, Bambey being more humid.
The oral rehydratation therapy (ORT) in case of diarrhea is exercised by 52% of mothers. There also, one observes a reduction in relation to numbers of MICS that indicated a rate of 93.4%.

ARI
The incidence of ARI is at 43% for children of 0-23 months. In 48% of cases, signs of ARI lead to care seeking the same day in only 32% of cases. The frequency of ARI was 35.9% for children of 0-5 years in the region of Tambacounda in 2000.

Malaria
Malaria (isolated fever is also assimilated to malaria here), affects 25% of children of 0-23 months. Facing this elevated incidence, preventive measures don't follow.
In spite of the 72% of mothers who know about the vectorial transmission and 90% of danger signs of malaria, only 21% of children sleep under ITN. This rate was, according to the MICS II, of 1.32% for children of 0-5 years in the region of Tambacounda. We can conclude that, in spite of an even insufficient performance level, the program has progressed in a significant way.

HIV/AIDS
Only 23% of mothers know that HIV can be transmitted during pregnancy. They rather believe that transmission occurs during childbirth. This conception corresponds to representations of the illness in Senegal and in the region of Tambacounda in particular, the passage of the genital pelvic path being considered like one instant of contact with foulness ".
Thirty eight percent of mothers think that a mother living with HIV can avoid its transmission to his/her child. They remain however anxious about the illness, 29% among them do not know if the HIV infection can be cured.

Contacts and sources of information concerning health

In general, mothers' contact with sources of health information is rare. The traditional healer constituted in 10% of cases a source of health information, against 15% for the official health system (physicians, midwives, nurses, CHA, CHW…).
If confidence in the official health system is increasing, it is necessary to recognize however that traditional healers remain the first choice in the health care system.
Finally, corroborating data of the DHS, the radio proves to be the mass media of choice within low educated population, with 48% of mothers having received information through radio the month preceding the survey.

3. FINDINGS AND RECOMMENDATIONS

The baseline survey achieved in the district of Tambacounda with a representative sample of mothers of children 0 to 23 months allowed us to make a baseline diagnosis of the situation before the introduction of a health program whose main interventions will focus on training, education, sensitization, advocacy and social mobilization.
At the end of this survey, important issues must be considered
- Regarding mother knowledge:
Levels of mother knowledge with regard to childcare are generally low. Less than half of mothers know about the advantages of the colostrum, causes of diarrheas, and maternal transmission of HIV. Only malaria and endemic illnesses seem to be best known.
- Regarding mother practices:
Recommended practices for child survival are not sufficiently known. The ORT beneficiary of multiple programs of promotion in the country since several decades, remain to an average level of practice. Care seeking is rare and usually delayed. Concerning literacy and education, mothers receive very little health information.
- Regarding health programs coverage
The consequence of low level of knowledge of mothers and the weak adherence to good child survival practices is the weakness in coverage of principal health programs. Utilization of the ITNs, vitamin A supplementation in, utilization of iodized salts by households…
Considering the decline of certain health programs that had previously reached higher coverage levels in the district of Tambacounda, the THSP should try to develop more vigorous upholding strategies:
- Greater involvement of local actors in the implementation of the THSP is essential: official health system, ONG, AFP…Creation of a piloting structure for the THSP uniting actors would be warranted.
This involvement should come in the earlier stages of activities development.
- Community capacity support necessarily requires an enhancement of educational level. THSP should consider advocate for girl primary education and literacy of mothers.
- In order to perpetuate health programs successes, THS should develop some active IEC approaches. The game W3 is an appropriate implementation example of this approach.

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Annex 1: Additional Indicators

CONTEXT

The health district of Tambacounda, located in the area of the same name in the Eastern part of Senegal, has 267,543 inhabitants on a surface of 20,328 kms2. It includes one commune (Tambacounda); four (4) districts (Koussanar, Koupentoum, Maka and Missirah); and twelve (12) rural communities. Tambacounda is a primarily rural department with 83% of its population living in rural areas. The health status of the population is poor. Indeed, 70% of the population lives more 5km from a health facility and 30% lives more than 15 kilometers. The district of Tambacounda has 1 doctor for 133, 771 inhabitants, one nurse for 7869 inhabitants and one midwife for 15,384 WRA. Tambacounda has very high maternal mortality rates (720/100,000 live births as compared to 510/100,000 live births at the national level) and a strong infant mortality rate (181/1000 as compared to 145/1000 at the national level). The health indicators are, consequently, among the lowest of the country. Vis-a-vis the situation of maternal and newborn health in the district, Africare decided to implement a project entitled "Tambacounda Healthy Start Progam" (THSP). This project uses three main strategies: community mobilization: formations of relay, volunteers, matrons, TBAs; organization of community meetings and advocacy of community leaders; organization of BCC sessions; Training and capacity building of local partners and the official health system; and equipping and procurement of essential materials for child survival.

The project aims mainly to:

- increase to 80% utilization of antenatal care services
- To increase to 60% the pregnant women receiving IPT
- To increase to 60% of the mothers/guardians who are able to recognize the danger signs for malaria and to seek care within 24 hours of the onset of the danger signs
- To increase by 40% the use of ITNs by pregnant women and children 0-5 years
- To increase by 30% the rate of exclusive breastfeeding
- To improve the nutritional status of children less than 5 years by 30%
- To improve access and use of micronutrients, especially iron and vitamin A.

A KPC survey was conducted in March 2004. However, this evaluation had omitted certain question related to sick child and the receipt of increased or same foods/fluids, knowledge of prevention of HIV/AIDS, handwashing, and tetanus toxoid vaccination for the mother. To correct these omission, a further inquiry was made to collect data on these indicators.

The specific objectives are as follows:

- To evaluate in the zones targeted by the project knowledge and practices of the mothers in management of the sick child, prevention of HIV/AIDS amd handwashing
- To measure the vaccine coverage for tetanus toxoid in the zones targeted by the THSP.

METHODOLOGY

The consultant used the KPC survey tool to develop and adapt the questionnaire. The questionnaire was developed, taking into account the indicators that project (THSP) must use to measure its efforts. This evaluation was carried out after the initial KPC survey March 2004. Thus, only four aspects were to be taken into account in this evaluation.

The questionnaire included:

- Three questions about knowledge in connection with feeding and provision of liquids to a sick child;
- Two questions about knowledge of the AIDS;
- One question about the washing of the hands;
- One question about Tetanus Toxoid vaccination.

The generic items of the CSTS were especially adapted by taking account of the answers expected on certain questions. Certain questions which seemed to be able to elicit several answers were revised, and the possibilities of response brought back to "yes/no"

Orientation of Interviewers

The orientation of the interviewers was held Tuesday July 13, 2004 at Africare's office in Tambacounda. During this meeting, the methodology was explained and the survey was discussed. It is necessary to say that the investigators were with the exception of the person in charge of health education for the health district were staff of Africare Senegal who had taken part in the first evaluation.

Methods

A representative sample of 220 mothers of children aged 0-23 months were interviewed. The consultant interviewed approximately 11 mothers in 20 clusters.

Data Collection

The data were collected in 3 days and analyzed using Epi Info 6

RESULTS

Characteristics

Table 1 : Distribution of women interviewed

Age	**#**	**%**
Less than 25	124	56.4%
25 to 34 years	79	35.9%
More than 35	17	7.7%
Total	220	100%

Tableau 2: Distribution of Children

Age	**#**	**%**
0 to 6 mos.	46	20.9%
6 to 12 mos.	80	36.4%
13 to 23 mos.	94	42.7%
Total	220	100%

3.2 Sick Child and Giving of liquids and foods

Table 3 : Distribution of children according to health status

Health State	**#**	**%**
Sick	185	84.1%
Not sick	35	15.9%
Total	220	100%

Table 4: Distribution of morbidity cases

Case	#	%
Diarrhea	119	64.3%
Bloody Stools	10	5.4%
Cough/Cold	104	56.2%
Difficult Breathing	32	17.3%
Fever	134	72.4%
Malaria	19	10.3%
Convulsion	08	4.3%
Other	11	5.9%

Table 5 : Giving of fluids to sick child according to age

Age	#	%
Less fluids	38	20.5%
Same fluids	84	45.4%
More fluids	63	34.1%
Total	185	100%

Table 6 : Giving of food to the sick child according to age

Age	#	%
Less food	99	53.5%
Same amount of food	65	35.1%
More food	21	11.4%
Total	185	100%

Table 7: Giving of liquids to child more than 5 months old

Age	#	%
Less fluid	09	20.0%
Same Fluid	23	51.1%
More Fluid	13	28.9%
Total	45	100%

Table 8: Giving of food to sick child older than 5 months

Age	#	%
Less food	21	46.7%
Same amount of food	19	42.2%
More food	05	11.1%
Total	45	100%

3.3 Knowledge of HIV/AIDS

Table 9: Distribution of mothers according to knowledge of HIV/AIDS

Have heard of it	#	%

Yes	202	91.8%
No	18	8.2%
Total	220	100%

Tableau : Methods of prevention mentioned among those who have heard of HIV/AIDS (N=202)

Methods cited	**#**	**%**
No correct method	47	23.3%
One correct method	68	33.7%
2 or more correct methods	87	43.1%
Total	**202**	**100%**

Only 43.1% of mothers and guardians cited at least 2 methods of prevention of HIV/AIDS. We also saw that 23.3% do not know any method of prevention of HIV/AIDS, which is approximately 1 out of 4 mothers.

3.4 Hand washing with soap/ash

Table 10: When mothers wash hands (N=220)

Moments cited	**#**	**%**
None of the 4 mentioned	39	17.7%
One mentioned	80	36.4%
Two conditions mentioned	61	27.7%
Three conditions mentioned	24	10.9%
Four conditions mentioned	16	7.3%
TOTAL	**220**	**100%**

Hand washing by mothers/guardians before preparing food, before feeding the child, after using the toilet and after cleaning the child could contribute considerably to the reduction in child morbidity. However, the survey revealed that only 7.3% of mothers/guardians wash their hands at all these moments.

3.5 Tetanus Toxoid

Table 11: TT Vaccination

	#	**%**
Yes	177	80.5%
No	37	16.8%
Don't Know	06	2.7%
Total	220	100%

Table 12: Availability of maternal health cards

Card	**#**	**%**
Available	108	49.1%
Not available	80	36.4%
Never had a card	32	14.5%
Total	220	100%

Tableau : Vitamin A coverage among women with cards (N=108)

Vit A	**#**	**%**
VAT1	98	90.7%
VAT2	78	72.2%
VAT3	08	7.4%
VAT4	01	0.9%

Africare

TAMBACOUNDA HEALTHY START PROGRAM (THSP)
'Begin Life in Good Health'

ANNEX 3: HEALTH FACILITY ASSESSMENT
FINAL REPORT (ENGLISH VERSION)

Dr Issa WONE
Consultant

Mars 2004

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SUMMARY

SUMMARY

The district of Tambacounda, among the most dispersed and isolated areas of Senegal, is benefiting from a new program focusing on maternal and child health, the Tambacounda Health Start Program. The present study consists of a situational analysis of the health facilities. It was accomplished through interviews with health personnel and direct observation of the facilities in the health district of Tambacounda. The results of this study show:

- The professional staff (nurses, midwives) benefit from more continuous training than the other non-professional staff working for the district. The support staff, while more involved with the care of the clients visiting the health facility, is often ignored for refresher trainings
- The health posts function in accordance with the policies and standards enacted by the ministry of health. One however notes failures in health program implementation, lack of monitoring and supervision, lack of certain services at some health facilities such as Oral Rehydration. One also notes insufficient integration of the health management information system from the private facilities for management purposes.
- One also notes that certain maternal and child health services have been ineffective (immunization, prenatal care, child spacing) in the private facilities.
- The health facilities are most consulted in cases of fever. There is not much utilization of the health facilities for matters of malnutrition, diarrheal diseases, and ARI/pneumonia.
- In terms of reproductive health (RH) these services are primarily offered in the context of antenatal care. The health facilities are not well utilized for STI treatment. The under utilization of services is linked to their relative unavailability, especially in the case of malnutrition. It could also be linked to the lack of sensitization.
- Advanced strategies are essential in a district like Tambacounda. However, they are not well oriented to achieving maximum impact relative to child health.
- An information system exists in the public structures. Information collected corresponds to those that are reported in the monthly reports. Certain data, however useful in the calculation of coverage rates, do not appear
- Reference documents are published and placed at the disposal of the workers of health on the rationalization of services. These documents are missing in many of the peripheral level health facilities in the health district of Tambacounda.
- Stock outs are frequent and often include the essential products such as Vitamin A capsules, sulfadoxine pirimethamine (S/P), ORS, chloroquine, cotrimoxazole, etc.
- The reasons cited to explain these stock outs include bad management.
- As it relates to immunization, logistics exist to ensure a functioning cold chain, but the system of quality control and follow-up of the cold chain is insufficient.
- The policy of cost recovery aims to ensure the viability of health services by bringing these services to a level where they are self financing. The rates are excessive, but there is no case where the public services are making a profit.
- The existence of a dynamic and well structures traditional healers association with a good community base that is also open to collaboration with the health sector is an asset for the THSP. However, training of these traditional healers will be an important task in order to make them powerful agents in community sensitization and mobilization.

At the end of the study, the following recommendations were made:

- To provide technical and logistical support to the District in terms of supervisions
- To integrate the private facilities in the information system, by giving them training and forms for data capture.
- To develop a training program for community actors depending on their needs and after having done an analysis of their training needs.

- To include the private facilities in operationalizing vertical programs, particularly those directed towards mother and child.
- To improve service delivery: training in the syndromic management of STI, childhood illnesses.
- To increase demand by emphasizing community sensitization on underutilized services.
- To provide logistical support for advanced strategies.
- To define and put in place a package of activities related to the advanced strategies.
- To institutionalize use of health information system.
- To sensitize the health staff on the use of certain data in monitoring service quality.
- To follow-up at the national level the adaptation of the algorithms
- To sensitize health workers on the availability and use of reference guides to implement national health policies.
- To monitor the correct use of algorithms.
- To monitor drug procurement at the district depositary
- To enhance supervision of drug inventory, especially for the essential products.
- To set up cold chain at those facilities where it is currently lacking and procure thermometers to ensure its proper functioning.
- To monitor quality control of vaccines.
- To define a kit of essential material for child survival and procure the supplies for the kit.
- To revitalize the community health committees.
- To apply the recommendations contained in the health worker guide as it relates to cost recovery.
- To encourage the community health committees to mobilize financial resources to support maternal and child health programs.
- To organize a workshop with the traditional healers on best practices in maternal and child health.

ACRONYMS

ANC	Antenatal Consultation
ARI	Acute Respiratory Infection
CHA	Community Health Agent
CIMCI	Community-Based Integrated Management of Childhood Illnesses
EPI	Expanded Programme on Immunization
HMIS	Health Management Information System
IMCI	Integrated Management of Childhood Illnesses
IEC	Information, Education, Communication
KPC	Knowledge, Practice and Coverage
MOH	Ministry of Health
NGO	Nongovernmental Organization
ORT	Oral Rehydration Therapy
STI	Sexually Transmitted Infection
TBA	Traditional Birth Attendant
THSP	Tambacounda Healthy Start Program
TT	Tetanus Toxoid

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1. CONTEXT, JUSTIFICATION, AND OBJECTIVES OF THE ASSESSMENT

The health district of Tambacounda occupies a surface of 20,328 kms2 for a population of 267,543 kms2. It is characterized by its dispersed population and geographic isolation, which poses a problem in accessing health services. Maternal and child mortality rates are among the highest in the country (720/100,000 live births and 181/1000 live births, respectively).

Health facilities include:

- 1 health center,
- 23 rural health posts, and
- 4 urban health posts.

In the commune of Tambacounda there is a regional hospital, 2 dispensaries and 2 private medical offices.

The personnel of the health district is composed of two doctors, 4 midwives, 2 dentists, 34 nurses and health agents, 12 hygiene agents and 130 community personnel. Of the 104 health huts, very few are actually functional. Tambacounda Healthy Start Program (THSP), initiated by AFRICARE, will provide technical assistance to the health system of Tambacounda. The present evaluation, which is exclusively focused on secondary level health services (health facilities), has the following objectives:

- To evaluate the training of health personnel in the visited health facilities;
- To assess the organization, operation and the supervision of the visited facilities;
- To assess the availability of maternal and newborn health services in the visited facilities.
- To assess maternal and child health services utilization;
- To assess the other activities of the health facility personnel outside of the facility;
- To assess the quality of the data registration system in the visited facilities;
- To assess the existence/availability of IEC materials for maternal and child health;
- To assess the drug management system;
- To assess cold chain management;
- To identify the existing equipment, necessary for effective implementation of child survival programs;
- To describe the attitudes of the traditional healers vis-à-vis maternal and newborn health.

2. METHODOLOGY

Our study comprised 2 aspects:

1) A semi quantitative survey, using direct observation and an interview with the person in charge of the health facility or his representative. Because of lack of manpower, charts supported by an analysis of the ratios and absolute frequencies were preferred with the proportions. However the rates and proportions were estimated for certain variables such as health services utilization or cost recovery. The averages are given with the standard deviation

2) A qualitative survey using focus group discussion with members of the traditional healers association in Tambacounda.

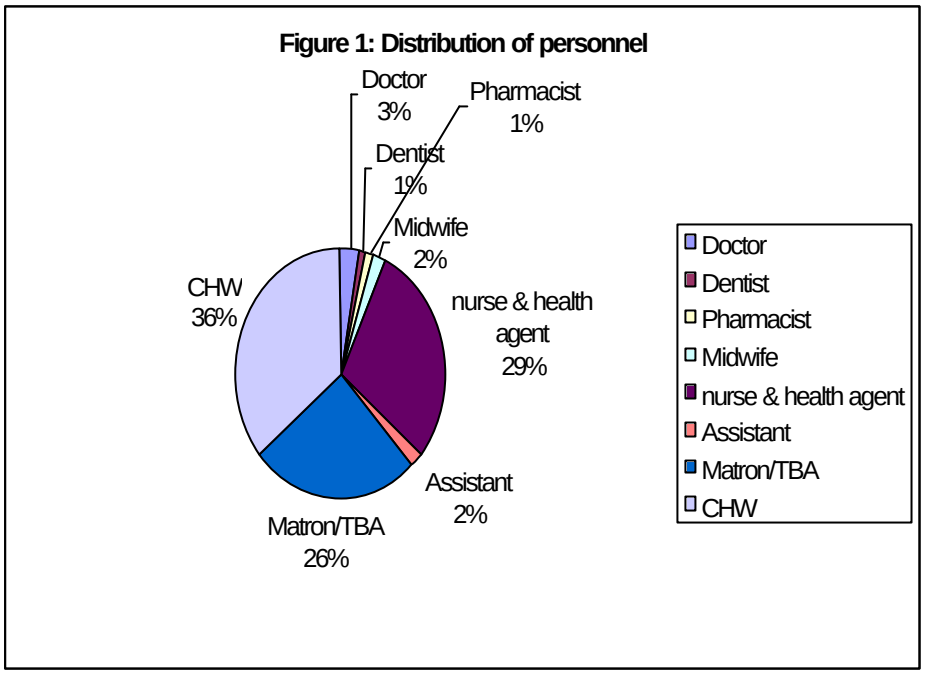
3. RESULTS, COMMENTS AND RECOMMENDATIONS

3.1. Health Facility Characteristics

On the whole, the evaluation team visited 31 health facilities (26 public health facilities; 4 private health facilities; and 1 confessional health post). The maternal and newborn ward in Tambacounda was classified as a public health facility.

3.2 human Resources

The distribution of health personal was follows:



Continuous Training

Of the 115 people visited at the health facilities, the majority were health agents, guards, or handymen. As it relates to the provision of continuous training, only 63% of the interviewees stated to have received some, by specifying the date. The ratio of those having been trained or having received refresher training to those not trained is 2.

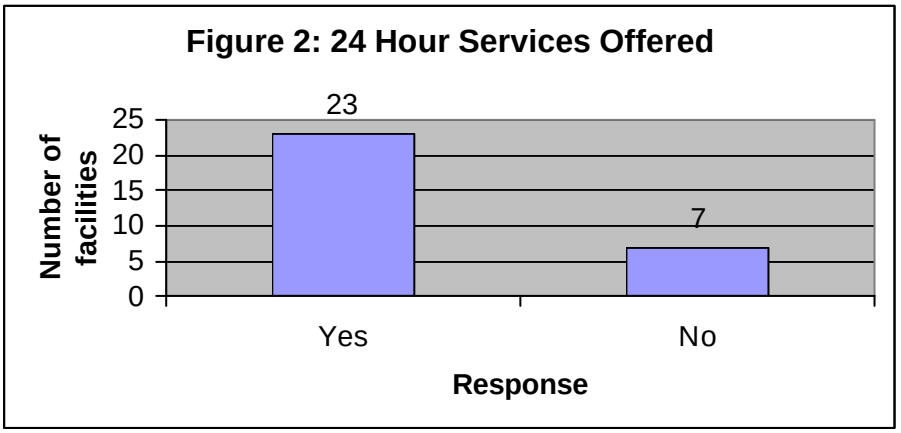
The time passed between the last training and the date of the interview was 21 months with a maximum of 138 months (11 years) and a minimum of 0. Some health workers were actually participating in a training at the time of the survey. We note that the intermediate level personnel (nurses, midwives) benefit from more continuous training than the lower level staff in the district. The support staff, however, is more implicated in the delivery of care, but do not benefit from continued training.

Recommendation:

- To develop a training program for community health agents based on their needs;
- Analysis of training needs of community health agents.

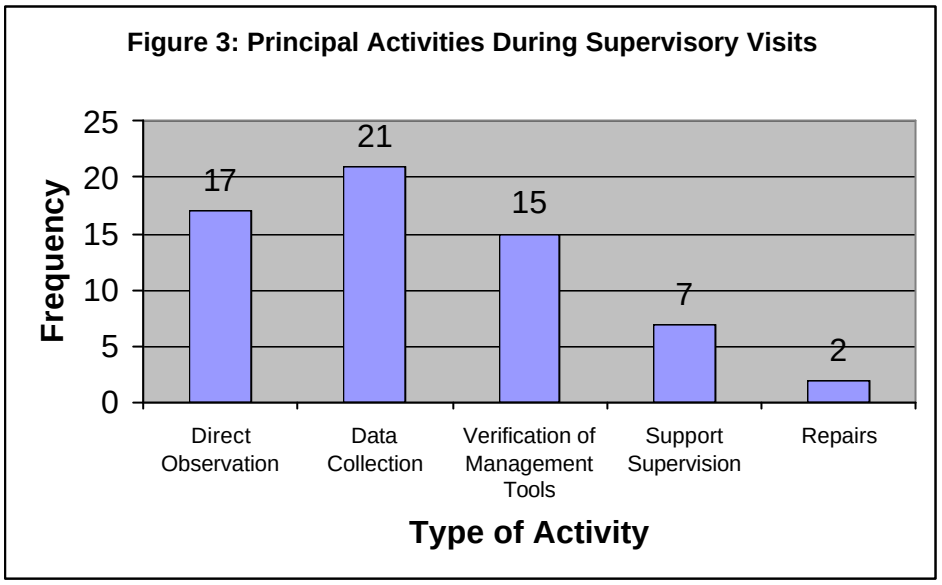
3.3 Organization, Functionality and Supervision

Only eleven of the 30 health facilities had a calendar of activities posted and 23 of the health facilities offered 24 hour services. Those facilities not offering 24 hours services were primarily located in the commune of Tambacounda and the private facilities (private Catholic dispensary of Medina Coura and the health center of SODEFITEX) **(figure).**

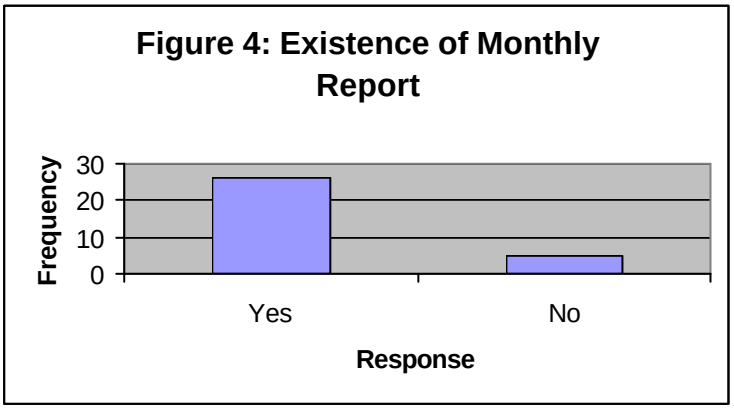


In the 31 structures there generally exists a substitute in the case of absence of the nurse or midwife. In general, the community health agent cares for patients when the above mentioned are absent. In cases where the facility lacked a substitute, the reason given was lack of qualified personnel.

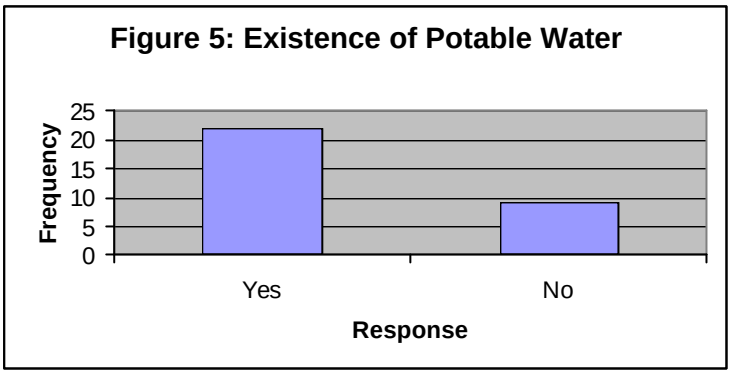
As it relates to supervision, the health facilities are generally supervised by the District Health Team. This is expected as the health posts are part of the district. National standards dictate that supervision should occur monthly by the District. However, this standard is far from respected, as most facilities had not received any supervisory visits in more than a month. Only 2 of the 27 public health facilities had received any supervisory visit in the last month.



The last supervisory visits carried out at the health posts were primarily for data collection. While the goal of supervision should be to improve the quality of the services provided by the health workers and then to assess their performance, such support supervision was only done in 7 of the last supervisory visits.

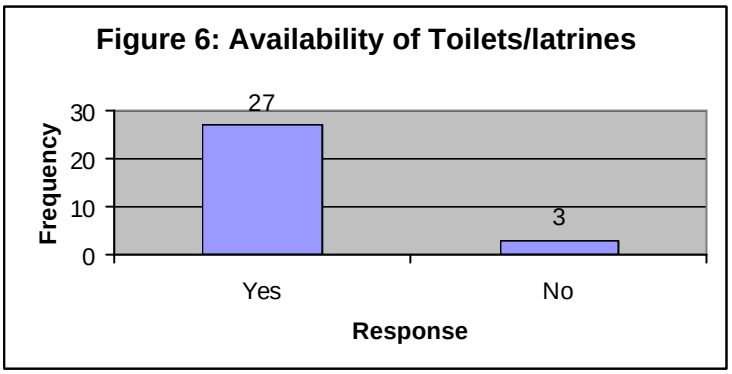


Five facilities have not submitted monthly reports. Paradoxically, 4 of the 5 were public health facilities who should be submitting these reports for the updating of the District's Health Management Information System. A waiting area was available to accommodate patients in 18 of the 31 facilities visited.



Potable water was available in 22 health facilities. In other words, in 3 facilities out of 10, the patients did not have access to water for their personal needs (figure). Oral Rehydration is recommended to manage serious dehydration in children within the context of IMCI. However, only 4 health facilities had Oral Rehydration Units.

Twenty-seven stations have functioning and clean[1] toilets/latrines.



On the 31 stations, half have maintenance personnel. However, considering the small size of the health facilities that were visited (about 3-4 buildings maximum), the need for such personnel is not as great.

The public health facilities function in accordance with MOH policies and standards. However, there are problems with program implementation, lack of support supervision, and unavailability of certain services such as oral rehydration. There is also a lack of integration of the health information from the private facilities in the health management information system.

Recommendations:

- Training in support supervision.
- Provide logistic support to carry out supervisory duties
- Integration of private health facilities into the District HMIS

3.4 Service Availability

The following table gives the average frequency of the services in the visited structures:

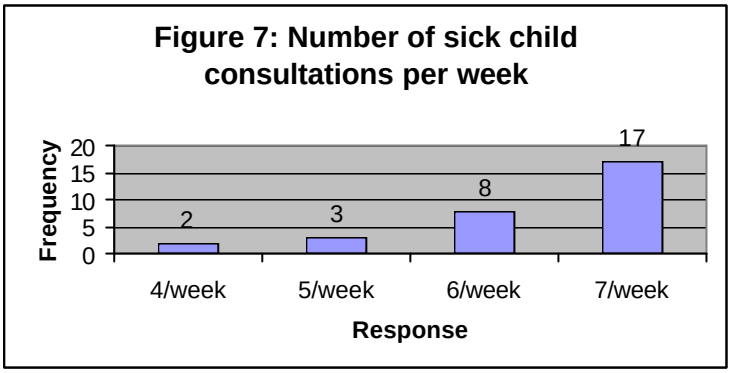
Table 1: average frequency of the routine services sought in a week at the visited facilities

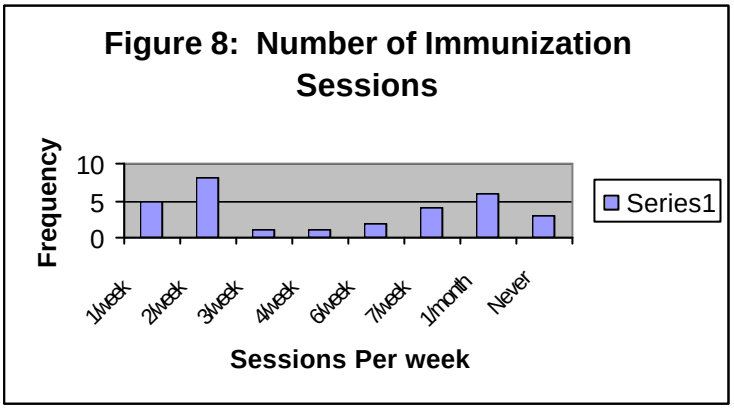
Service	Avg/Week	Std Deviation
Sick Child Consultation	6	1,76
ANC	4	2,83

[1] Subjective determination made by the evaluator.

Child Spacing	5	2,85
Adult Consultation	6	1,41
Emergencies	6	1,64

We notice that in the majority of the cases, sick child consultations are done daily, contrary to ANC and reproductive health/child spacing consultations. The following figures give additional details for each service.





Six facilities reported that they have organized immunization sessions at least once a month. Three of the facilities have never organized such meetings of which only one was a public health facility.

Included among the facilities, which have never organized antenatal care services, are the Catholic private dispensary, Communal Health Post and the Health Posts of Saré Guillé. These same health facilities do not provide child spacing services either.

Routine primary care services are done practically every day and most health facilities do conduct health education at the health facilities.

As it relates to service availability, we note that certain services are not available especially for maternal and child health (vaccinations, CPN, spacing of the births) in the private facilities or those located in the commune. The district must play its role of integrating the health policies and their application of standards on all levels.

Recommendations

- Implication by the persons in charge of the District's private facilities in the implementation of maternal and child health programs.

3.5 Service Utilization

Table 2: Primary Cause for consultations for children under five in the last month.

	# of facilities	Min	Max	Total	%	Monthly Average	Std Dev
Diarrhea	30	0	68	609	21%	20	19
ARI	29	0	102	636	22%	22	25
Fever	29	0	108	1153	40%	40	28
Malnutrition	30	0	50	179	6%	6	12
Other	29	0	40	326	11%	11	12
TOTAL				**2903**	100%		

We notice that the fever constitutes the principal reason for frequentation of the health facilities, followed by diarrhea and ARI.

Table 3: Utilization of Health Facilities for Reproductive Health Services in the Last Month.

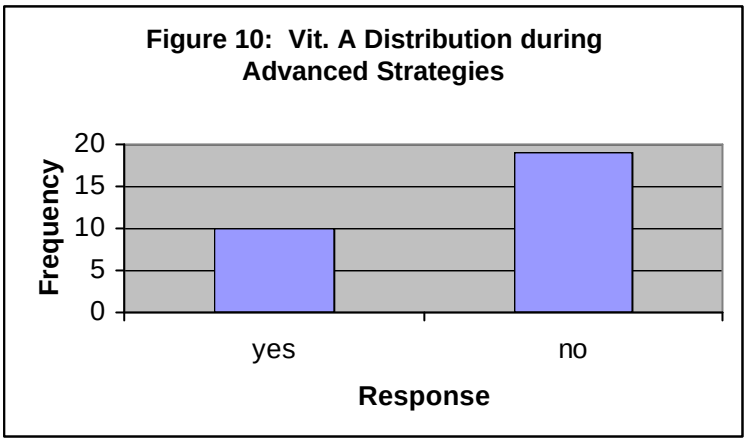
	# of facilities	Minimum	Maximum	Total	%	Monthly Average	Std Dev
ANC	30	0	136	1378	59%	46	35
Child Spacing	30	0	210	691	30%	23	43
STI	29	0	27	259	11%	9	8
TOTAL				**2328**	**100%**		

The services are most used for cases of fever. Services for key illnesses (malnutrition, the diarrheal diseases, ARI) are underutilized. Among all reproductive health services, ANC is most utilized. STI services are not well-utilized. Underutilization of the services mentioned is certainly connected to weak service availability, particularly as regards malnutrition. It can also be connected to a defect of sensitizing.

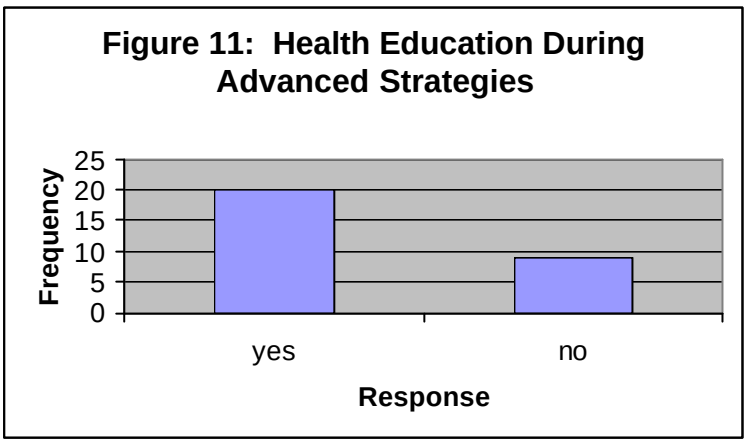
- To improve service delivery: training in syndromic management of STI, IMCI, equipment ;
- To increase demand by emphasizing IEC messages.

3.6 Advanced Strategies

The health team leaves the post on average 1.4 ± 0.8 times per week to go into the communities to offer health services. These strategies are mainly directed towards childhood immunization and immunization of pregnant women (TT). Educational activities are generally carried out in the context of health facility's advanced strategies. Two health facilities have never participated in advanced strategies (maternal and newborn ward in Tambacounda and the confessional health facility); One (1) health post stated that they conduct these sessions once a month. Nine of the visits have been made by the nurse; 7 by the health agent; 4 by the midwife; and 3 by the matron (head of health hut). None of the doctors in the visited health facilities participate in these activities. The following graphs show the frequency of health education and Vitamin A distribution during the conduct of the advanced strategies.



Vitamin A is not generally distributed during the advanced strategies. On the other hand, health education constitutes a principal activity of the advanced strategies.



The advanced strategies are essential in a zone like Tambacounda due to the dispersion of the population and the geographic isolation of certain areas. Since Vitamin A distribution is a tracer of child survival activities, the relative lack of distribution at the community level constitute a weakness for child survival activities as a whole.

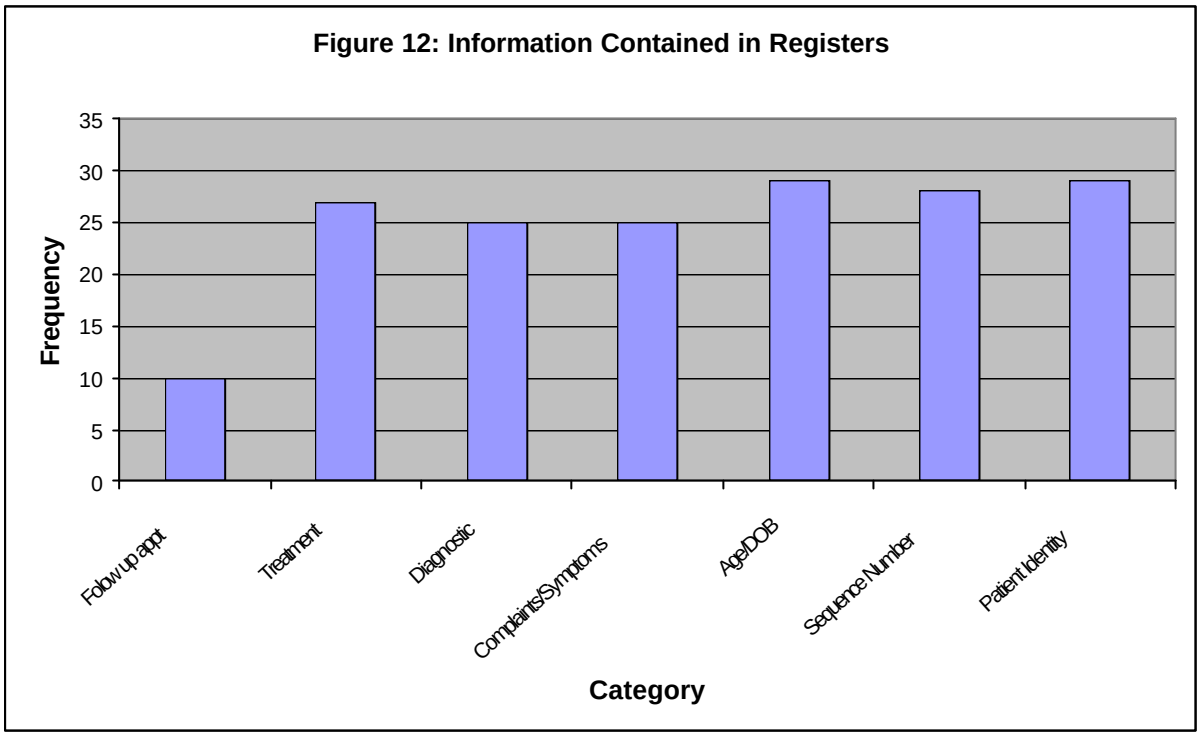
Recommendations:

- Provide logistical support for conduct of advanced strategies
- Define a package of activities for child survival related to the advanced strategies**.**

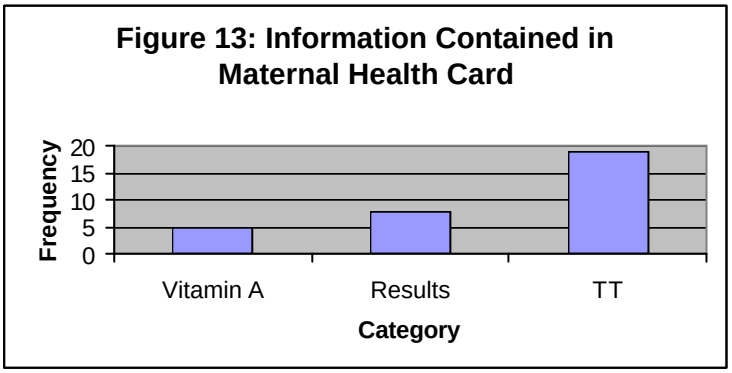
3.7 Data Registers

The registers for antenatal consultations exist generally in 24 of the facilities which offer these services. EPI registers were available in 27 of the facilities. However, most of the facilities in Saré Guillé and Koussanar were completely out of stock of data management tools.

As it relates to the information collected in the registers, follow-up appointments are rarely reported on even though it is part of the health management information system.



On the health record of the mother, Vitamin A supplementation after birth is seldom mentioned. This does not certainly reflect the quality of the data but simply the weakness of vitamin A coverage after delivery (see KPC) (figure).



The HMIS forms exist in the public health facilities. The information reported on corresponds with the monthly reports of the zone. Certain data, however useful in the calculation of coverage rates, do not appear (ex: follow-up appointments).

Recommendations:

- Increase utilization of the HMIS forms for all the services provided
- Sensitize the health workers on the utility of certain data for monitoring service quality

3.8 Norms and Protocols

The health posts guide a reference guide published by the MOH to facilitate implementation of health programs at the peripheral health facilities. There is a lot of information in the guide including information on the rights and obligations of the health workers in the execution of these programs. This guide was seldom present and available in the health facilities. Only 14 health facilities had the guide and were able to produce it during the interviews.

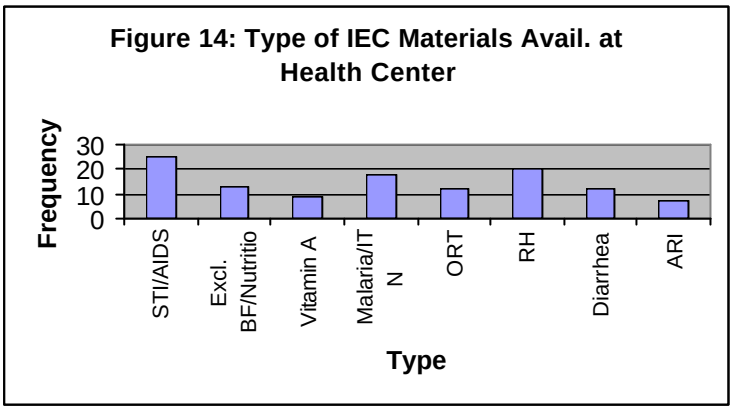
The algorithms or process charts are decision trees intended to rationalize the care at the district level. They start with the signs or symptoms most frequently encountered in the country: diarrhea, fever, and cough. These algorithms are gathered in a booklet that the MOH has given to all health facilities. Out of 31 facilities, this booklet was found in only 20. The document setting the standards and protocols for reproductive health was only available in 20 of the facilities.

Recommendations:

- Follow up at the national level the adaptation of these algorithms ;
- Sensitize the health workers about their availability and the use of the reference documents (Health Worker Guide and Reproductive Health Protocols) for implementation of health programs according to national norms and protocols ;
- Ensure that the algorithms are being correctly used during support supervision visits.

3.9 IEC Materials

IEC materials include posters, brochures, and visual aides. However not many IEC materials were found for those programs that most benefit child survival including exclusive breastfeeding, oral rehydration therapy, Vitamin A supplementation and iodized salt and the fight against



3.10 Medicine and pharmaceuticals

The drug stock register is intended to check the physical state of the drugs on a continuous basis. It is generally available in 21 of the 31 visited health facilities.

However, the majority of the facilities (17) reported drug stock outs in the 30 days preceding the survey. The following table gives the frequency of the stock outs by product, for the products having actually known a rupture. The problems mentioned to explain the out-of-stock conditions were: rupture on the level of the deposit of district, transportation difficulties and in one case the interviewee was unable to remember the reason.

Table 4: Products that have experienced stock out in the 30 days preceding survey.

PRODUCT	# of health facilities affected
Condoms	1
Mebendazole	1
Penicilline inj	1
Dépo provéra	1
Métronidazole	1
Amoxicilline cp	2
BCG	2
Cotrimoxazole	2
Chloroquine cp	2
Iron	2
Measles vaccine	2
ORS	4
Diazepam cp	4
Erythromycine cp	5
Ocytocine inj	5
Vitamin A	6
Sulfadoxine pirimethamine	6

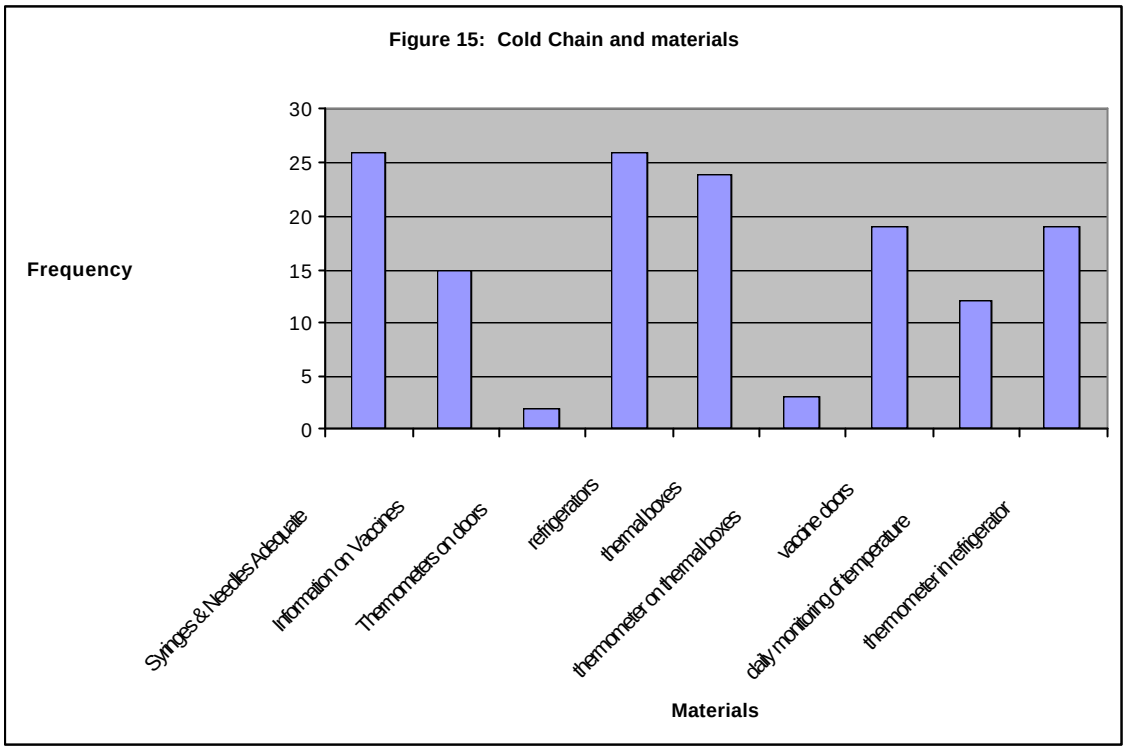
Drug stock outs are frequent for essential products such as vitamin A, SP, ORS, chloroquine, cotrimoxazole, etc. The primary reason cited for these stock outs was bad management.

Recommendations:

- Look after the procurement mechanism at the district depositary
- Enhance supervision for drug management

3.11 Cold Chain, Materials for vaccinations

We generally notice that the cold chain exists (refrigerators, doors vaccines, boxes isothermal) but the monitoring of the cold chain has been inadequate: thermometers absent or temperature not taken (figure).

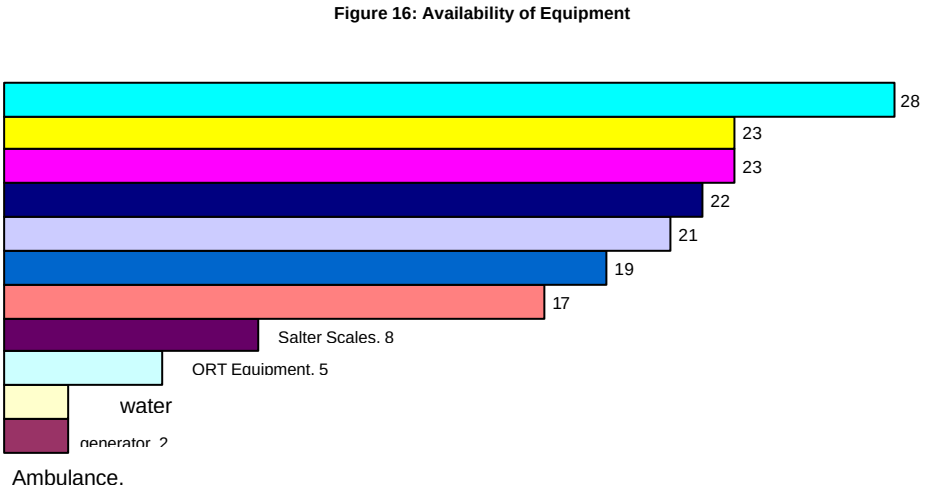


Recommendations

- Provide cold chain to facilities where it is lacking
- Supplement the cold chain with thermometers
- Increase supervision over the quality control of vaccines

3.12 Equipment

One notes a marked deficiency of certain essential equipment for effective implementation of child survival programs: Salter scales, utensils for ORT.

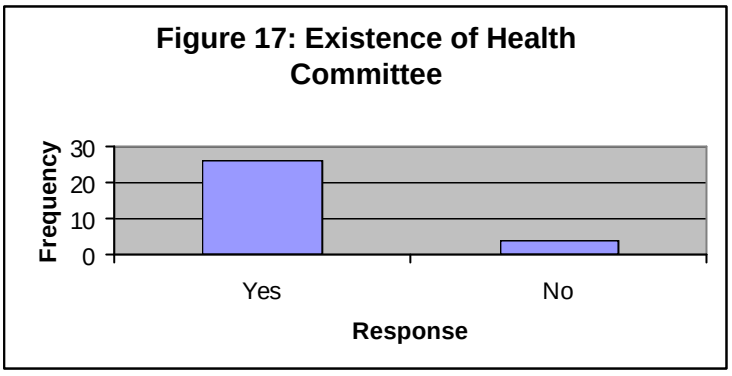


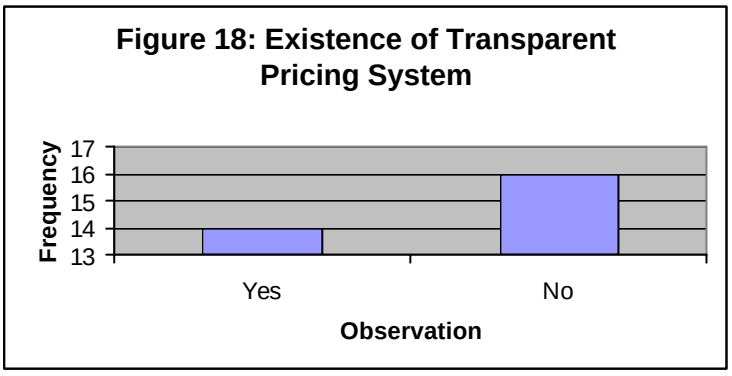
Recommendations:

- Define a kit with essential materials for child survival.
- Procure the kits and provide them to the health facilities.

3.13 Health Committee, Cost Recovery

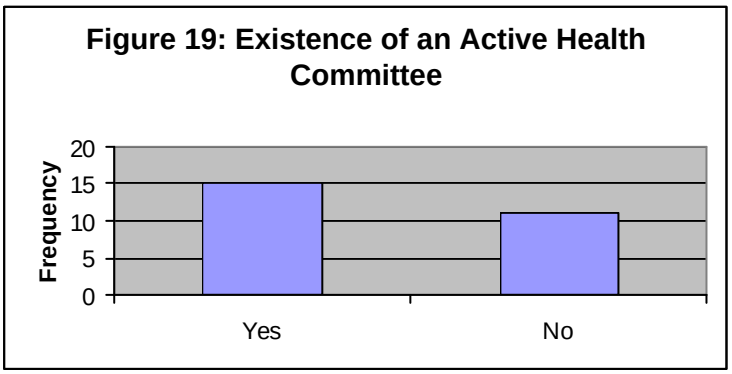
The community health committees exist according to the Council 98-118 orders, which organize them around the health facilities. Their existence is thus obligatory on the level of the public health facilities. The private health facilities do not have community health committees. A similar situation exits as it relates to cost recovery. 27 of the facilities did have such a system in place. Five did not.





It is the opinion of the evaluator that in most cases, the pricing system at the health facilities was not transparent. Prices are not fixed and fluctuate depending on the season and other factors.

According to decree 98-11, the health committees must be renewed every two years to remain regular. In the facilities where the committees exist, they do not participate in planning the activities of the health facility (figure) (15/25).



The health committees were created "to manage community participation in health programs". Concretely, that means their implication in planning, implementation, evaluation of all health programs. The participation of these committees was considered to be non-existent in 4 out of 10

cases. As it relates to the receipts and expenditure of the facilities, the average cost recovery rate (total expenditure/receipts) is 148% ± 83. One notes cost recovery rates of 422% (public health facility of Hamdalaye) and 83% (public health facility of Malème Niani). The policy of cost recovery, aims to ensure the viability of health services through progressive financing. However, the listed rates are excessive even though the public health services should not be making a profit.

Recommendations:
- Revitalize non functioning health committees;
- To apply the recommendations contained in the health workers' guide with regard to pricing ;
- To encourage the health committees to mobilize the financial resources to support maternal and child health programs.

3.14 Traditional Medicine

3.14.1 Institutional Capacity
The traditional healers of Tambacounda are organized into an association called the Association of Traditional Healers. This association was recognized by decree n° 99-04 on March 02, 1999, and possesses a statute and operating procedures. The association occupies a building where they hold meetings. This has been accomplished with the support of the local NGO PROMETRA. The members of the association contribute 500 francs CFA on a monthly basis for basic operations. The association is structured by department, each one headed by a president. The members meet twice a month. The persons in charge for the association have visions of longer term development. They wish to develop partnerships with traditional healers in other areas including Ivory Coast and Benin. The association is quite representative and includes almost all the traditional healers in the region.

3.14.2 Perception of the problems of maternal and newborn health
The traditional healers have knowledge of the determinants of high maternal and child mortality rates in the region: « it's because of early marriages ", "the women neglect ANC and hide their pregnancy at the beginning". Nevertheless, they also attribute some of the problems to a weak health infrastructure citing insufficient personnel and low technical qualifications and surgeries causing many maternal deaths. The traditional healers also noted that certain changes in the way women work during their pregnancy are needed: "Today, we recommend to the pregnant woman to rest whereas before, the woman was going to the fields until she delivered ».

3.14.2 Representation and Interventions
According to traditional birth attendants, the principal cause of maternal morbidity and mortality is the "kuna", which is a disease consisting of a "wound" in the interior of the belly of the pregnant woman. The "kuna" usually appears by abundant periods or hemorrhaging. The kuna would also appear by a "tumefaction" in the breasts. The traditional healers recommend the reintroduction of practices including traditional massage with shea butter in an effort to reduce maternal morbidity. However, the traditional healers/birth attendants stated certain practices that they follow such as not cutting the cord if they are close to a health facility or counseling the women to give their children colostrum. Some traditional practices are considered more advanced than modern practices: "our ancestors did not wash the infant until the cord fell." Some other traditional practices that were mentioned included:

- giving goat's milk as the "toxxantal" which would make the child strong
- Binding the umbilical cord with horse hair.

As it relates to the infant, the traditional healers insisted on the close link which exists between the health of infant and that of the mother. Indeed, any disease of the mother would be transmitted by

the mother who would become thus "unhealthy". As it relates to diarrhea, they cited causes like bad food or teething. They also evoked other causes: bad wind, breast feeding while pregnant.

As it relates to ARI/pneumonia "dënn bu rëcc" (literally loose chest), the traditional diagnosis is made by measuring the distance between the shoulder and the brain which would be equal to the thoracic diameter of the child. ARI exists if the distance is less than the thoracic diameter. This disease is treated through use of the traditional massage, like by phytotherapy. The traditional healers recognized the ole of hygiene in preventing many childhood illnesses. The traditional healers did not want to go into further detail of their treatment of certain childhood diseases stating that they "had already said too much".

3.14.3 Relationship with the Health System

The traditional healers stated that they had good relations with the official health system but that there is a lack of true collaboration. They are often invited to the seminars and other events organized by the district, but are not implicated in the search for solutions to the health problems uncovered. In addition, aside from the NGO PROMETRA, the traditional healers do not have any significant contact with any other NGO intervening in the area of health.
The existence of such an association that is both dynamic and well structures is an asset for THSP. There should however, be some training for them in order to make them powerful advocates for key messages as it relates to maternal and child health.

Recommendations:
To organize a workshop in order to sensitize the traditional healers on key practices related to maternal and child health.

4. CONCLUSION

The situational analysis of the secondary level health facilities in Tambacounda allowed the evaluator to assess the functionality of these services and to make recommendations to THSP to support the health care system. As it relates to continuous training, more attention needs to be given to lower level health personnel and community health workers (health agents, matrons and traditional birth attendants). There is need for more effective supervision of human resources and an increase in services offered at the health facility. In particular, more attention should be given to the integration of the private sector in maternal and child health programs to achieve the health objectives of the district.

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